FEBRUARY 2, 1935

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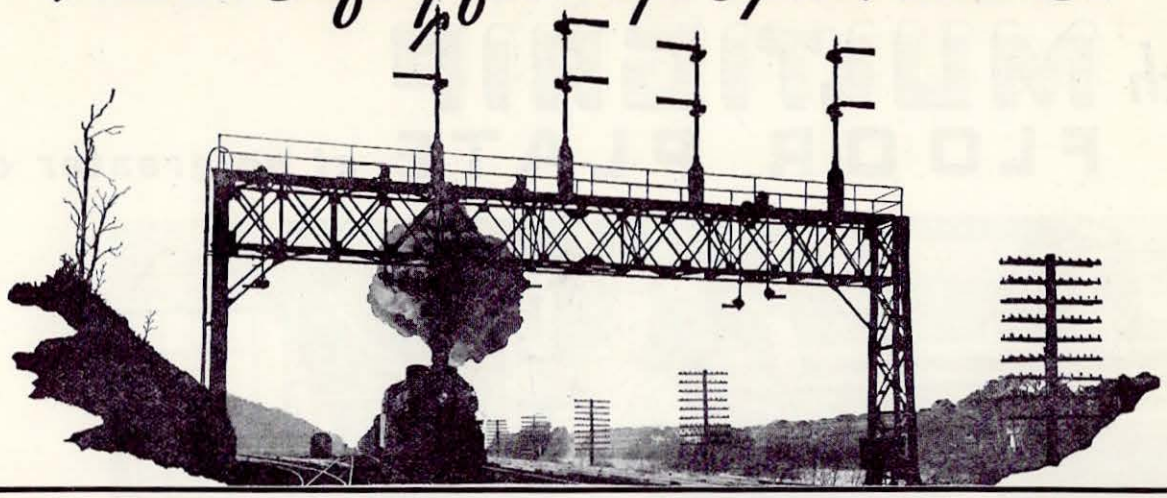
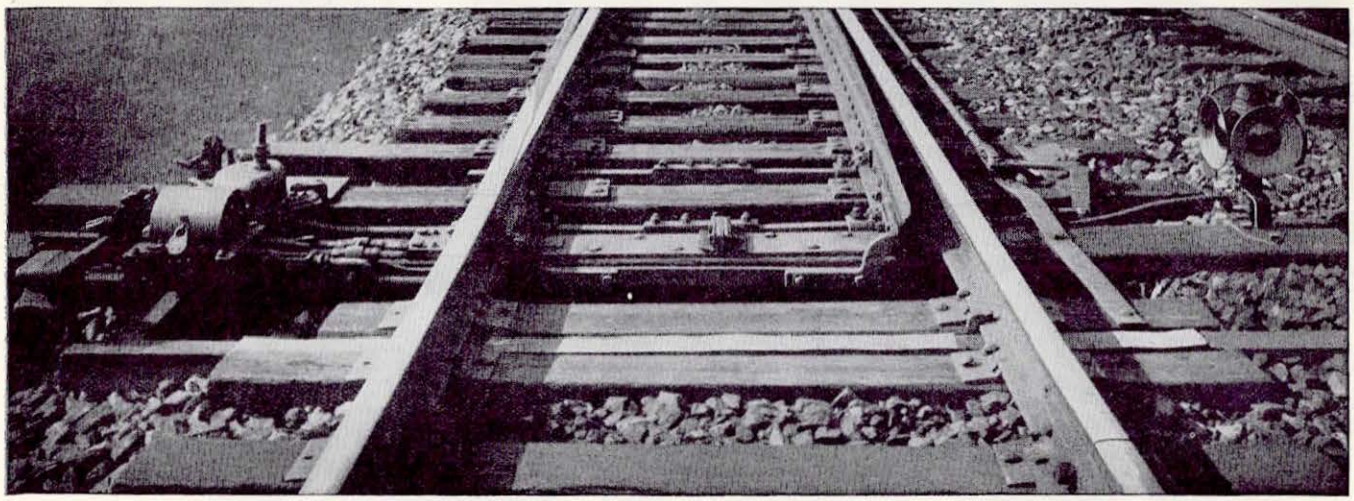
Added Safety for High-Speed Trains



A COMPLETE CHECK ON SWITCH POINTS



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3 Danger is indicated if the switch is run through, leaving the switch points open ⅛ inch or more.

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5 Switch points protected by a positive safety point-lock automatically operated by the switch stand.

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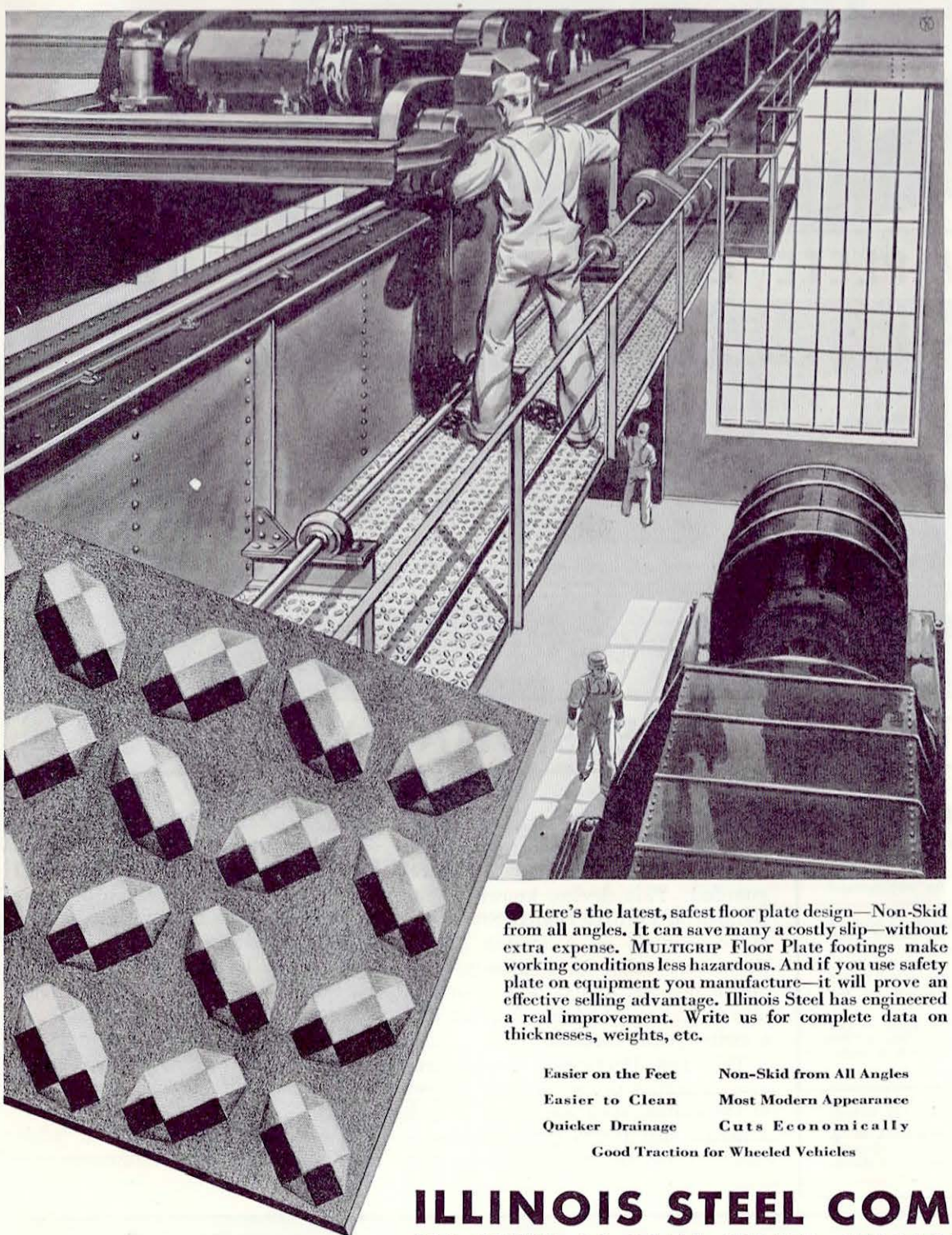

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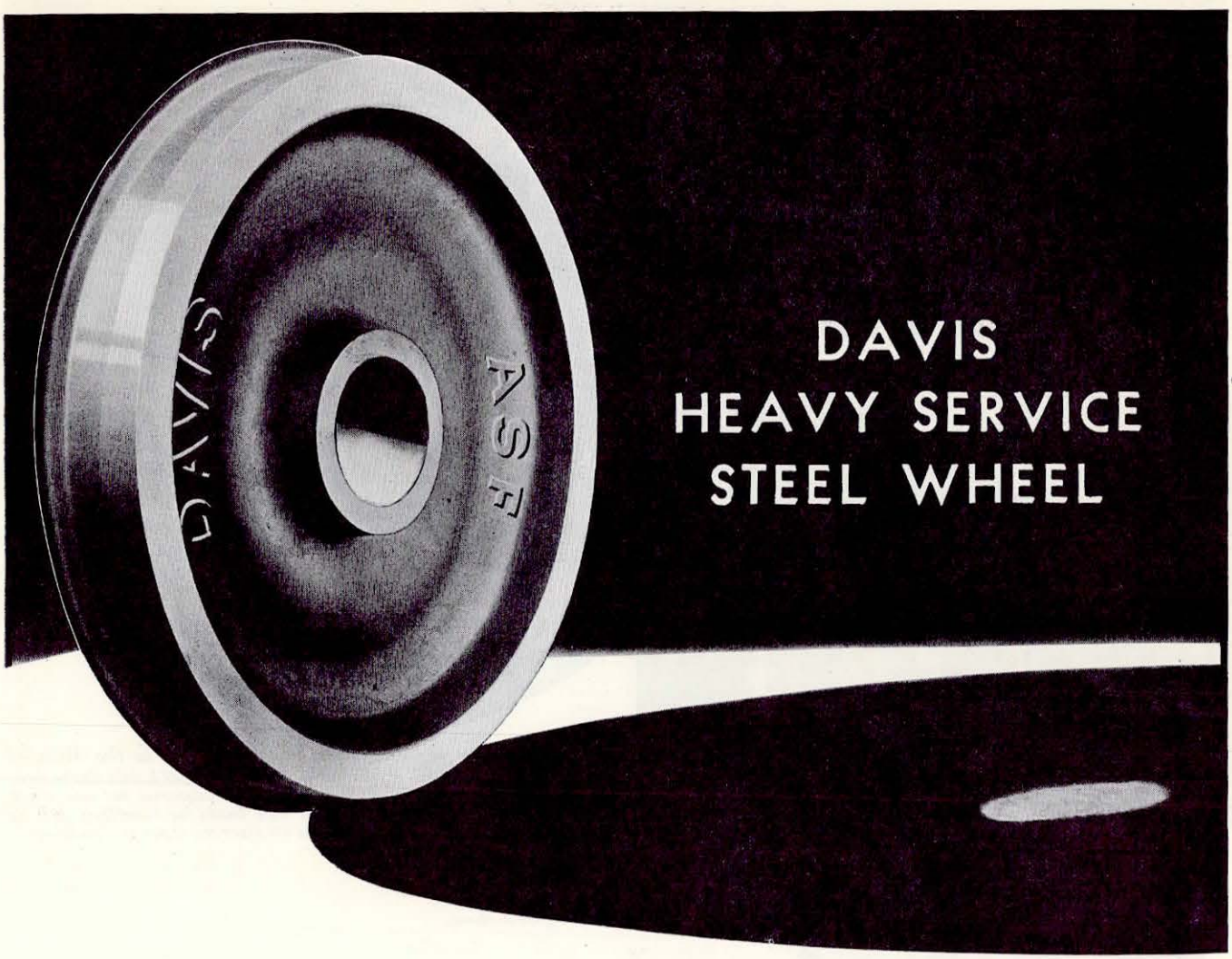

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A wheel that will carry heavy loads safely and with comparative freedom from tread injuries resulting from severe brake applications.

A wheel that has sufficient thickness of metal in the rim to permit several wears.

A wheel that will deliver dependable service under high speed locomotive tenders and passenger cars at a low cost per thousand miles.

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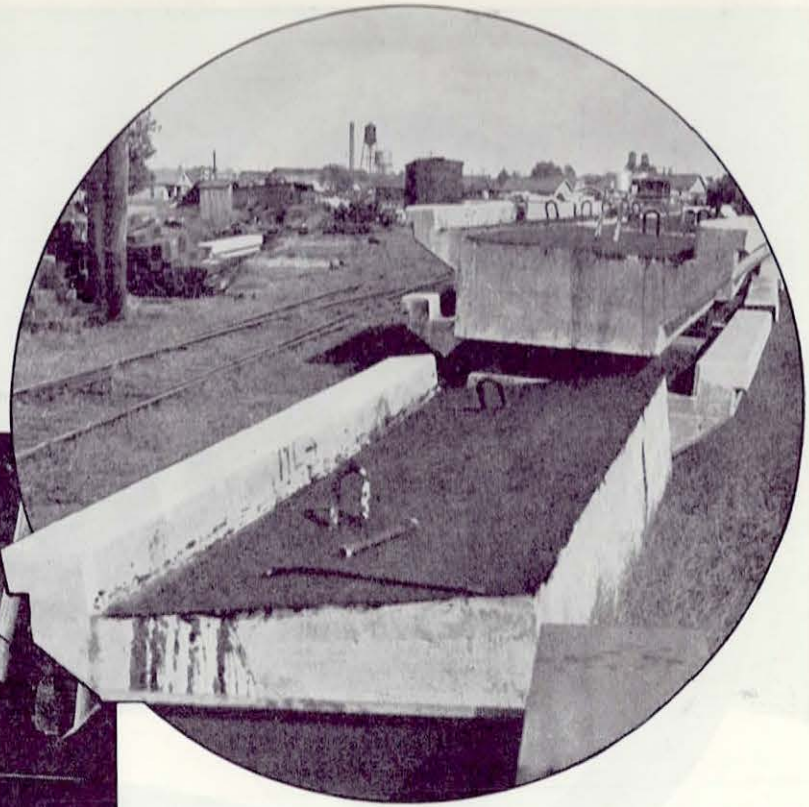
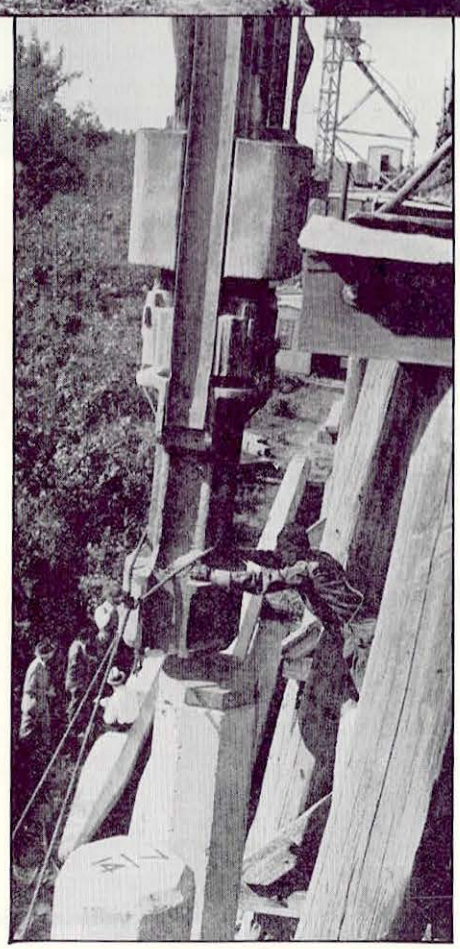
FORWARD STRIDES IN TRESTLE CONSTRUCTION



Here are trestle slabs in the Missouri Pacific casting yard at Little Rock, Ark. Two slabs are required for one track width. The hooks for handling will be burned off after the slabs are positioned.

These piles and bents are worthy of the famous slogan—concrete for permanence. Rot and rust and fire and flood can not prevail against them.



This picture shows how the concrete piles are driven outside *the stringer line. The man serves as a yardstick, emphasizing the size of driving cap and hammer.*

CONCRETE trestles are now being built by Missouri Pacific engineers *at practically the same cost* as old style trestles and with *less interference* with traffic. Yet these *handsome* new structures can't burn—won't rot—never rust—defy termites—are flood-proof—cut maintenance sharply—build prestige.

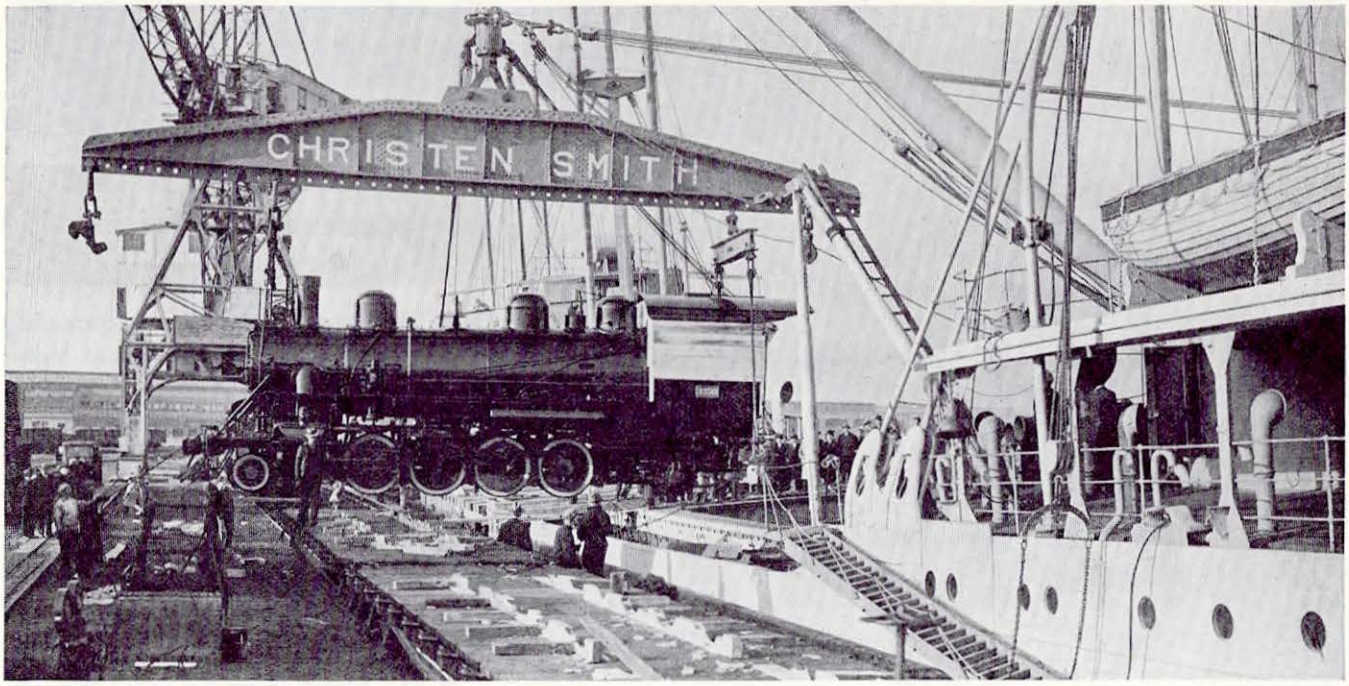
All this is made possible by a new technique in utilizing concrete piles 24 inches in diameter and 25 to 60 feet long; pre-cast concrete bents; and pre-cast concrete deck slabs.

Three of the concrete piles replace six old style piles and they are driven outside and inside of the stringer lines without disturbing the latter. This results in minimum interference with traffic and great economies in construction.

Deck slabs may be installed quickly on the bents and the track put in service even before ballast is placed.

Write for more information on this progress in trestle building

PORTLAND CEMENT ASSOCIATION
Room 192, 33 West Grand Avenue, Chicago, Ill.



TEN LOCOMOTIVES FOR CHILE

Baldwin recently shipped, from its Eddystone dock, ten Mikado type locomotives for the Chilean State Railways.

These locomotives formed part of the largest export shipment of railway material to leave the United States since 1929.

Large numbers of Baldwin steam and Baldwin-Westinghouse electric locomotives have been serving the railways of Chile for more than 50 years.

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Railway Age

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The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

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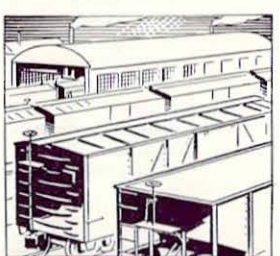

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RAILWAY AGE

The Railway Labor Leaders' Program of Exploitation

Almost no person or group of persons is reasonable regarding any matter involving his or its assumed self-interest. When self-interest is involved, desires and feelings usually corrupt and subordinate reason. Often the manifestations of unreasonableness are unconscious and unintentional, but not a few persons intentionally try to exploit others. When this is done on a large scale it usually is by efforts to use political or economic power.

All great depressions have been largely or mainly caused and protracted by the use of political and economic power by those who had much of such power for the exploitation of those who had less or none of it. Those who attempted the exploitation with temporary success impaired or destroyed the purchasing power of those who had less political or economic power than themselves, and, by thus reducing or destroying their markets, largely or completely ruined themselves. That the exploiters usually do not know that they are acting contrary to their own long-run interest as well as the public interest does not alter the fact. Human selfishness usually is ignorant and short-sighted. The history of the world, economic and otherwise, is strewn with the wreckage caused by individuals or groups who ruined themselves as well as others by their short-sighted efforts to exploit others.

"None So Blind as Those That Will Not See"

There could not be any better illustrations of selfish efforts to exploit others, the temporary success of which would be harmful or ruinous both to the public and the intended exploiters, than the demands for legislation being made now by organized labor in the United States, and especially by the leaders of the railway labor unions. We say "the leaders of the railway labor unions," because it is impossible for the *Railway Age* to believe that a large majority of the 1,700,000 persons who were employed by the railways six years ago, and of whom about 700,000 are now unemployed, can believe that the legislative program recently announced by the union leaders is in the interest of a large majority of this 1,700,000 employees and former employees. It is especially difficult to believe in the sincerity of certain statements made by the labor leaders in support of their program.

They said, "While general economic conditions have improved to some extent in the recent past, the condition of the railway industry continues to be most distressing and alarming." This entirely accurate statement was used as an argument against any program having for its purpose "the wholesale unification and abandonment of railway lines and facilities." "To propose a further shrinkage of railway employment and purchases of materials and supplies," the labor leaders said, "is to further depress the existing low levels of business." Now, we submit that adoption of the legislative program of the labor leaders would produce in much more disastrous extent and degree the effects of which they express apprehension than any program that has emanated at any time from any other source whatever. There are none so blind as those who will not see. There can be no other explanation of the course of labor leaders, who show so much intelligence and skill in other ways, in advocating, in the ostensible interest of railway employees and the public, legislation which would so certainly be destructive of the interest of both.

Co-Ordinator Eastman's Record and Views

That their program is absolutely contrary to the interest of both railway employees and former employees and the public is not merely the opinion of the *Railway Age,* which the labor leaders regard as a partisan of the railways. The Federal Co-ordinator of Transportation, Joseph B. Eastman, has a record that makes it impossible for any rational person to suspect him of being either anti-labor or pro-railway. He was secretary of the Public Franchise League of Boston

in 1906-1913. He was counsel for employees of various street railway companies in wage arbitration cases in 1913-1914. He was until recently an advocate of government ownership of railways. As a member of the Interstate Commerce Commission his expressed views regarding railroad valuation and the profits the railways should be allowed to earn have been somewhat similar to those of the railway labor leaders. As Co-ordinator of Transportation he has been a severe critic of railway management.

In his address at the meeting of the railway labor leaders in Chicago on January 12, however, Mr. Eastman said: "It seems perfectly clear to me that it is no time to add to railroad expense and that *labor will suffer if this is done.* * * * The six-hour day, *unless it is put in at the expense of railroad labor,* will add at least $400,000,000 to railroad expenses. * * * Take legislation, also, like the full-crew bill or the train-length bill. * * * As mere 'make-work' measures, what will they do to the railroads in their competition with the trucks and boats and all the other competitive agencies? * * * Personally, I am convinced that *if the railroad industry can cut its cost down and adjust its services to the demands of today it can employ many more men than it now does.*" The implication of all this was plain.

Gross Earnings Determine Railway Payroll

Nevertheless, the labor leaders adopted a legislative program which it is estimated would, on the basis of the service rendered and the number of persons employed in 1930, increase the operating expenses of the railways $1,250,000,000 a year. Railway gross earnings in 1930 were $5,281,200,000. Operating expenses were $3,931,000,000. Taxes were $348,500,000. On the basis of 1930, therefore, the proposed legislation, if it accomplished the purpose of the labor leaders, would make operating expenses and taxes almost $250,000,000 annually more than gross earnings, and leave the railways with that much less than no operating income at all with which to pay even interest on bonds.

The first inevitable effect of the adoption of this program, or any substantial part of it, would be a further drastic reduction in the number of railway employees. All experience shows that gross earnings determine the total pay roll. In 1920, just after the railways were returned to private operation, and during most of which year their net return was guaranteed by the government, the pay roll was 55½ per cent of gross earnings. In the depression year 1921, however, the pay roll was reduced to less than 47 per cent of gross earnings by reductions of wages and the laying off of almost 400,000 employees. During the eight years ending with 1929 the pay roll varied only between 42.6 and 44.4 per cent of gross earnings. During the depression years 1930, 1931 and 1932, when earnings were declining faster than retrenchments could be made, it was 44.8 per cent, 46.9 per cent and 46.0 per cent. In 1933, however, it was down to 43.0 per cent, partly because of the 10 per cent reduction of wages, but mainly because the number of employees had been reduced by 700,000. Neither the railroad nor any other industry will meet a pay roll out of all proportion to its gross earnings, because it cannot. It is still true that one cannot get blood out of a turnip.

The basic working day on the railways in 1914 was ten hours and in 1933 it was eight hours. But gross earnings were almost the same in the two years, and consequently the pay roll was almost the same. The average wage per hour was almost 150 per cent higher in 1933 than in 1914, but the number of persons to whom any wages at all were paid was about 700,000 less. The number employed for eight hours a day was so much less than the number employed for ten hours a day because gross earnings determined and limited the total pay roll that could be met. This is experience. It is irrefutable. Adopt such legislation as the labor leaders now advocate, and history will repeat itself.

Labor Leaders' Demands and Railway Buying

One of the most extraordinary parts of the labor leaders' statement is that in which they deplored the "further depressing of existing low levels of business" due to reduction of purchases of materials and supplies that would be caused by unification and abandonment of railway facilities. Their own program is the best ever devised to cause this result. Total purchases of the railways in 1929 amounted to $2,284,434,000 and gave employment to at least 1,000,000 persons in other industries. Their decline of about 72 per cent in 1932 and 1933 deprived probably 700,000 persons of employment in other industries.

The *Railway Age* repeatedly has demonstrated that the volume of purchases made by the railways from manufacturers are normally determined by the amount of net operating income they earn. An average annual decline of 52 per cent in their net operating income in the four depression years 1930-1933 caused an average annual decline of 55 per cent in their purchases from manufacturers. A large increase in their net operating income is absolutely essential to enabling the railways substantially and lastingly to increase their purchases from manufacturers. And yet the labor leaders advocate a program calculated to wipe out all net operating income while deploring the "further shrinkage of * * * purchases of materials and supplies" that would be the inevitable result of any program that prevented a large increase of net operating income! Their program would not only not cause the increase in railway employment they claim, but by its curtailment of railway buying, would selfishly and heartlessly increase and prolong the unemployment of hundreds of thousands of persons in the manufacturing and other industries.

The vital essential to an increase in railway employment and buying is an increase in gross earnings

accompanied by a reduction of labor and other costs of operation. An expansion of general business, and especially of business and employment in the durable goods industries, is the thing most necessary to an increase in traffic and gross earnings. The program of the labor leaders is directly inimical to a revival of the durable goods industries, because it would curtail railway purchases from them.

Labor Leaders and Competitive Transportation

Another thing needed to increase railway traffic and gross earnings is federal and state legislation to equalize terms of competition between carriers. The labor leaders, in their statement, referred to the need of "regulation of competing forms of transportation." They said elsewhere, however, that "While the industry feels keenly the reduced volume of traffic, it cannot be said that this is entirely responsible for existing conditions. The unsound financial policies resulting in a staggering burden of debt, and the loss of traffic to highway motor carriers and other transportation competitors, together with the failure of the railway operators to furnish the character of service demanded by the traveling and shipping public, can be said to be the major causes of the industry's difficulties."

Throughout the country state associations of railway employees have been organized to promote legislation to withdraw subsidies from other carriers and to apply to them regulation similar to that applied to the railways. The *Railway Age* has criticised railway labor union leaders for not actively and energetically participating in this effort. They have claimed that our criticisms were unjust. Their own statement justifies them. While paying lip service to the cause of equal government treatment of all carriers, it accepts and helps to disseminate anti-railway propaganda of competing carriers the purpose of which is to prevent equal government treatment.

Increase Expenses Regardless of Earnings

There are those in the railway industry who have been optimistic enough to believe that the sincere and energetic co-operation of railway labor union leaders could be secured in behalf of legislation that would be beneficial to both the railways and their employees. If the recent statement of the railway labor leaders does not blast their optimism it is hard to conceive of what would. They could have put in their program a strong declaration in favor of such legislation, but they did not declare for one specific action or policy, which, by increasing railway earnings, would help make possible an increase of railway employment and buying. They took the same course that they almost always have taken. They declared specifically only in favor of policies that would enormously increase operating expenses, leaving it entirely to the managements to devise the means of getting the earnings with which to pay the increased expenses, and at the same time joining with the enemies of the railways in libeling their managements in order, perhaps, to make it as difficult as possible to get increased earnings.

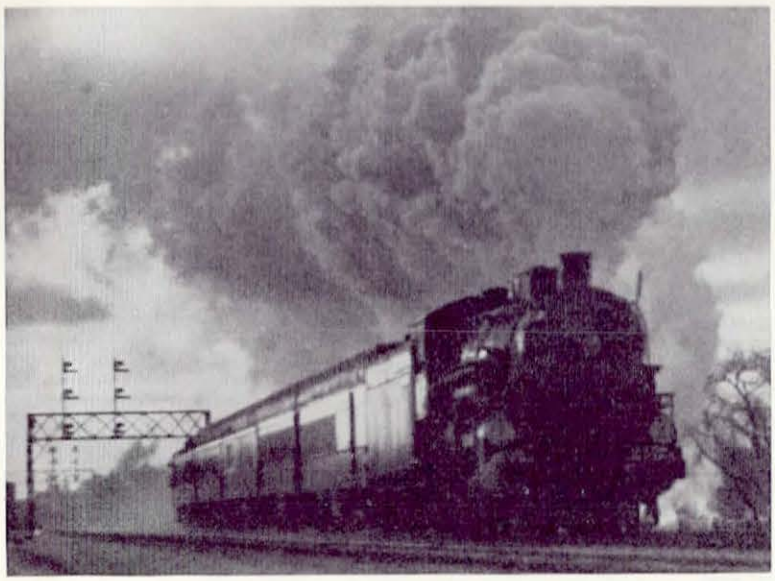
Labor Leaders' Challenge Must Be Squarely Met

No more shortsightedly selfish declaration ever emanated from any source. Either the men who made it are economically illiterate, or they are playing the game of labor politics with a reckless disregard of consequences to anybody but themselves. It is a declaration of a program to exploit the railway industry to destruction and through it to exploit the entire rate-paying or tax-paying American public. The present employees of the railways already are a favored class—favored at the cost of hundreds of thousands of former railway employees that existing high wage scales make it impossible for the railways to employ; favored at the expense of hundreds of thousands of unemployed in other industries from which existing wage scales make it impossible for the railways to buy; favored at the expense of all the many millions of persons who must, directly or indirectly, pay relatively high railway rates because of high railway labor costs. And the labor leaders declare, ostensibly in the interest not only of present railway employees, but of all these millions of other persons that are now unemployed, or are directly or indirectly paying present high railway wages, that railway costs of operation must be enormously increased!

In their own interest, and in the interest of their present employees, of their hundreds of thousands of unemployed, and of the American people, the managements of the railways should accept the challenge of the labor leaders and resist to the utmost their effort to use their supposed political and economic power for wholesale exploitation. The railways should not only fight their legislative program, but they should demand and use all the available machinery of the Railway Labor Act to secure changes in wages and working conditions that will make reasonable the cost of railway service and the rates that must be charged for it. The railways must meet competition and reestablish their earning, employing and buying power, or go out of business as a private industry. They should meet the attacks being made upon them from various sources, and especially from labor union sources, with a determination to do whatever may be necessary to stay in business as a private industry.

They met the issue squarely when confronted with a nation-wide strike of their shop employees in 1922, and that strike and its results proved to be of great benefit to them. They had just as well recognize the fact now that the present leaders of the railway labor unions, like most labor union leaders, are merely labor politicians whose policy is to promote programs of unconscionable exploitation for their own selfish purposes, and that the least expensive and only safe policy for the railways is to assume the aggressive and fight to a finish for the establishment of costs of operation that will be reasonable under present and prospective transportation and economic conditions.

North Western Inaugurates "400" High-Speed Train Service



The "400" on Her Trial Run

Six-car trains of conventional steel construction with modern fittings, hauled by reconditioned Pacific type steam locomotives are placed in mile-a-minute service between Chicago and Twin Cities

ON JANUARY 2 the Chicago & North Western placed in regular daily operation between Chicago and the Twin Cities, Minn., the first high-speed standard steam-driven passenger train designed to give equivalent or better service than modern streamline, light-weight, Diesel-electric equipment. The new train, as mentioned in an advance news item in the *Railway Age* of December 29, is entirely modern in appointments and is air-conditioned throughout. It provides all of the comforts and safety features of standard railway equipment. It is also, for the present at least, the fastest train in regular long-distance passenger service in America and is officially known as the "400" because it makes the distance of over 400 miles between Chicago and St. Paul in slightly over 400 min.

The average speed of the train is 58.4 m.p.h., including three 5-min. stops, or 60.5 m.p.h., excluding stops. The train is said to be capable of maximum speeds in excess of 100 m.p.h.

Referring to the table, it will be noted that the distance from Chicago to St. Paul, over the North Western line via Milwaukee, is 408.6 miles, and the scheduled operating time, including stops at Milwaukee, Wis., Adams and Eau Claire, is 7 hr., which cuts 2 hr. 50 min. from the fastest previous North Western schedule. The 85-mile run from Chicago to Milwaukee is made in 80 minutes, or 10 minutes less than the fastest previous schedule. The late afternoon departure of both the northbound train No. 401 and the southbound train No. 400 is designed to permit business men traveling between the two cities to utilize day-train service with practically no sacrifice of business time.

The "400," as originally placed in service, was intended to be a five-car train, including one baggage coach, one standard coach, one lounge coach, one dining car and one parlor-observation car. The popularity of the train has been such, however, as to necessitate the provision of one additional parlor car to date, and it seems probable that increased dining car capacity will be required. The prompt and favorable reaction to the new train is indicated by the fact that during the first 11 days of operation an average of 174.3 passengers were handled northbound and 191 passengers southbound, as many as 135 passengers being given dining car service on one trip.

One of the greatest advantages of this modernized steam train, from a railroad point of view, is its flexibility in meeting varying passenger traffic requirements and the ability of the locomotive to haul an additional car when necessary without change in schedule. The train is notably easy-riding, which reflects careful roadbed preparations for high-speed operation, these preparations having included reballasting, curve elevation and complete testing of rails with a Sperry rail detector car.

Schedule of Stops Made by North Western "400" Trains Operating Between Chicago and Minneapolis, Minn.

No. 401 Northbound	Miles		No. 400 Southbound
Lv. 3:30 p.m.	0	Chicago	Ar. 10:30 p.m.
Ar. 4:50	85.0	Milwaukee	Lv. 9:10
Lv. 4:55	85.0	Milwaukee	Ar. 9:05
Ar. 6:52	209.5	Adams	Lv. 7:02
Lv. 6:57	209.5	Adams	Ar. 6:57
Ar. 8:49	243.1	Eau Claire	Lv. 5:05
Lv. 8:54	243.1	Eau Claire	Ar. 5:02
Ar. 10:30	408.6	St. Paul	Lv. 3:30
Ar. 11:00 p.m.	419.2	Minneapolis	Lv. 3:00 p.m.

Operating Features of the New Train

The scheduling of the "400" was accomplished through numerous conferences between the engineering, mechanical and operating officers, during the course

of which it was decided to have the north- and southbound trains meet at Adams, Wis., approximately halfway between Chicago and Minneapolis. The North Western line, for about 50 miles on either side of Adams, is single track, but the meeting and passing of these high-speed trains has been worked out so as to avoid any delay. The northbound train leaves Adams just as the southbound train arrives. A passing track of ample capacity is provided, with a penstock between the main line and the passing track to permit either train to take water.

The only possibility of delay at this meeting point is for one or the other of the trains to be late. However, so carefully have preliminary arrangements been made that, during the first month of operation, the meet has been effected without any delay to either train on the part of the other. Moreover, the entire high-speed operating schedule has been successfully maintained with the exception of two relatively minor delays due to exceptionally adverse weather conditions and one delay due to a truck failure on a freight train.

Both the locomotives and the engine crews of the "400" are changed, each way, at Milwaukee, thus meeting crew-change requirements and, in addition, providing a reserve of power at that point in case of emergency. Another important advantage of this arrangement is that a full tank of water can be obtained for outgoing locomotives without delay and without the expense of installing water penstocks at the Milwaukee passenger station.

In addition to Milwaukee and Adams, the scheduled stop at Eau Claire is utilized to take water, thus making, in effect, three places at which water is taken during each one-way trip of 408.6 miles. The total consumption of water is approximately 32,000 gal. per trip. No stops for fuel are necessary as the locomotives are arranged to burn fuel oil and the capacity of the oil cistern on each tender is almost adequate for a complete round trip. The oil consumption is about 2,740 gal. per one-way trip.

The six standard steel railway cars, which comprise the "400," weigh 456.7 tons and the locomotive and tender, loaded, weigh 296.0 tons, or a total of 752.7 tons. Under maximum load conditions with 275 passengers on the train, the unit weight is slightly under 3 tons per passenger, a figure strongly objected to by advocates of light-weight equipment as being unnecessarily high and therefore uneconomic. The position of the North Western is that this modernized high-speed steam train, with its safety, reliability and easy-riding properties, coupled with relatively low carrying charges and flexibility of operation, will provide real competition for the light-weight streamlined diesel-electric trains which are now attracting so much popular attention.

Steam Power Conditioned for High Speeds

To provide power for hauling the "400," four North Western Pacific-type locomotives of the E-2 Class were taken into the Chicago shops of the C. & N. W. and conditioned for high-speed service, the alterations and conditioning work being done in a period of 60 days and at a cost of $14,000 per locomotive.

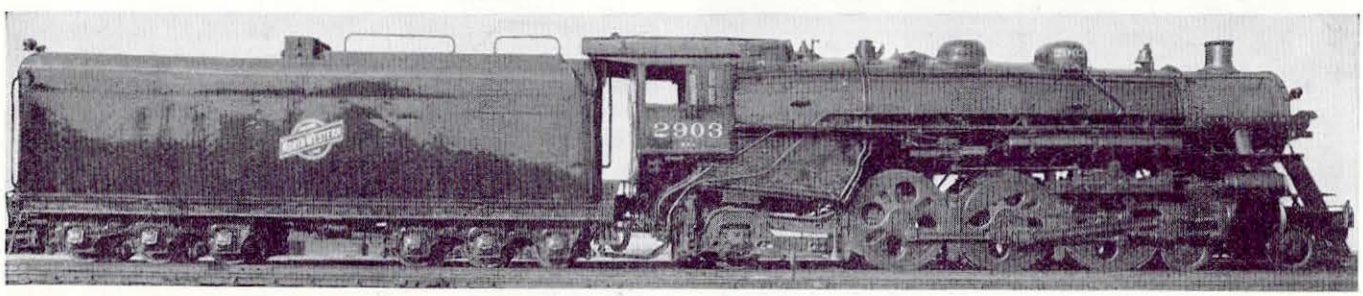
The reconditioned Class E-2-A locomotive is of conventional design, develops a tractive force of 45,800 lb., and weighs 295,000 lb., the weight on the driving wheels being 178,500 lb. The total weight of the engine and tender loaded is 592,000 lb. No change was made in the locomotive boiler except to increase the steam pressure from 210 to 225 lb., which could be done and still maintain an adequate factor of safety. The combined heating surface of the boiler, including tubes, flues, thermic syphons, firebox and combustion chamber, is 3,235.2 sq. ft. A new type of superheater unit, known as the H-A-4, recently developed by the Superheater Company, was installed for test purposes on one locomotive to demonstrate the possibility of obtaining a higher superheated steam temperature without any radical change in boiler design.

Larger Driving Wheels Applied

To facilitate operating at high speeds, the locomotive was equipped with larger driving wheels, of the Boxpok type, made by the General Steel Castings Corporation, the outside wheel diameter being increased from 75 to 79 in. The valve gears on this class of locomotive had previously been adjusted to give more power and smoother running at high speeds. The main driving wheels were carefully cross-counterbalanced to assure smooth operation of the locomotive at high speeds and to produce a minimum of stress in the track structure. Due to the increase in steam pressure and consequent heavier piston thrust, the piston-rod diameter was increased ¼ in. New main driving axles, crank pins and piston rods were applied throughout, being made of a 100,000-lb. high-tensile steel furnished by the Standard Steel Works.

The locomotive was converted from coal to oil burning to avoid the necessity of making stops en route for fuel and for ash-pan cleaning. Other special equipment installed on the locomotive included a Wilson blow-off cock muffler, Barco low-water alarm, Franklin Type-E-2 radial friction buffer, and Hunt-Spiller duplex valve and piston packing. One of the locomotives was equipped with Smith high-speed piston valves for test purposes. Special superheat valve oil and driving journal grease, as well as fuel oil used on the locomotives, is furnished by the Standard Oil Company.

Important changes were made in the tender, the tank of which was increased to 34 ft. 10½ in. in length by inserting a new 6-ft. section in the center and welding the entire tank on a Commonwealth one-piece cast-steel tender frame, furnished by the General Steel Castings Corporation. The four-wheel tender trucks formerly used on the Class E-2 locomotive tenders were replaced by Commonwealth six-wheel tender trucks. The reconstructed tank has a capacity of 15,000 gal. of water



One of the Class E-2-A Locomotives, Reconditioned for Fast Passenger Service on the "400"

Interior Views of the Completely Redecorated and Modernized Diner (Left), Lounge Coach (Center) and Parlor Car (Right)

and is provided with an oil cistern, fitted in the coal space, which will hold 5,000 gal. of fuel oil.

For use in the "400" high-speed train, standard North Western car equipment was selected and placed in the best possible condition. In general, air-conditioning equipment was installed in all cars, the interiors of which were completely redecorated in bright colors, seats re-upholstered, curtains renewed, hot and cold water provided in coach lavatories, modern drinking fountains, radio equipment, etc., installed. In applying the side deck ducts for the air-conditioning system, the ducts were carried the full length of the car in dummy form where not actually needed, giving a streamlined effect to the car roof. The only change in the running gear consisted of the application of special side bearings designed by a North Western truck-shop foreman and now being marketed by the Railway Products Company. These side bearings have been tested on the North Western for four years and, besides eliminating side-bearing pounds, are said to provide sufficient take-up to eliminate the constant attention and adjustment usually necessary to assure a quiet, easy-riding car.

The air-conditioning system is of the ice-activated type, designed by the North Western and utilizing air-conditioning units furnished either by the Young Company, Racine, Wis., or the Trane Company, La Crosse, Wis. This system includes two ice bunkers of 1,600 lb. capacity each, located under each car just ahead of one truck and having a 30-gal. sump between them to receive the chilled water after it has passed over the ice.

Highly Attractive Interior Appointments in the Standard Coach

Adjacent to the sump is a Chicago water pump, driven by a Baldor ½-hp. electric motor, which delivers the chilled water through Chase streamline copper pipe to fin-type cooling coils in the overhead air-conditioning unit located in the clerestory at one end of the car. Air, passing by the coils, is cooled by the transmission of heat to the water which returns to the ice bunkers and sump. To vary the cooling effect, the pump motor speed is increased or decreased, under thermostatic control from a Vapor air-conditioning control panel, usually located, for convenience, in the other end of the car. By means of a Vapor automatic by-pass valve, also thermostatically controlled, the water is returned directly to the sump if not heated to a temperature of over 50 deg. F. while passing through the air-cooling unit, thus assuring the economical use of ice. If above 50 deg., the correct proportion of water repasses over the ice and the balance is wasted through an overflow tank located at the end of the ice box.

Air circulation is provided by means of a direct-connected electric-driven double blower unit, of 2,000-cu. ft.-per-min. capacity, which forces air through the conditioning unit into a plenum, or pressure chamber, from which the cork-insulated distributing ducts lead along the sides of the clerestory to Uniflo grilles located, as necessary, for purposes of air distribution in the car body. In the lounge-coach, for example, the duct on one side has an area of 240 sq. in. and three 7-in. by 24-in. outlets to the main room. The duct on the other side, with an area of 160 sq. in., has two 7-in. by 24-in. outlets, one in the men's lounge and one in the women's lounge. About 75 per cent of the air is recirculated and 25 per cent fresh. The recirculated air enters the bottom of the air-conditioning chamber through a grille and filter in the ceiling. Fresh air is taken in through a side deck intake and filter in the passageway to the air-conditioning chamber. The fresh air can be decreased for extremely cold weather conditions by using a manually operated damper.

The temperature control in each car also is manually operated and has three positions, namely, a low temperature of 71 deg. F. for outside temperatures of 75 to 80 deg. F.; a medium temperature of 75 deg. F. for outside temperatures of 80 to 85 deg. F.; and a high temperature of 80 deg. F. for outside temperatures of over 90 deg. For intermediate outside temperatures ranging from 70 to 75 deg., fresh air only is needed in the car for air-conditioning purposes, and a device with auxiliary outside air intake and two sets of dampers is provided, one controlling the intake and the other the recirculating air grille. By means of thermostatic control, this device

opens the auxiliary outside intake and closes the recirculating air grille to utilize fresh air only at the intermediate temperatures mentioned.

To purify the air discharged into the car through the air-conditioning apparatus and especially to vitalize that portion which is recirculated, a machine, made by the Ozone Pure Airifier Company, is installed in the air chamber just behind the blower fan to furnish oxygen. The distribution of oxygen is uniform throughout the car and eliminates the musty odors which have caused criticism in air-conditioned cars in the past.

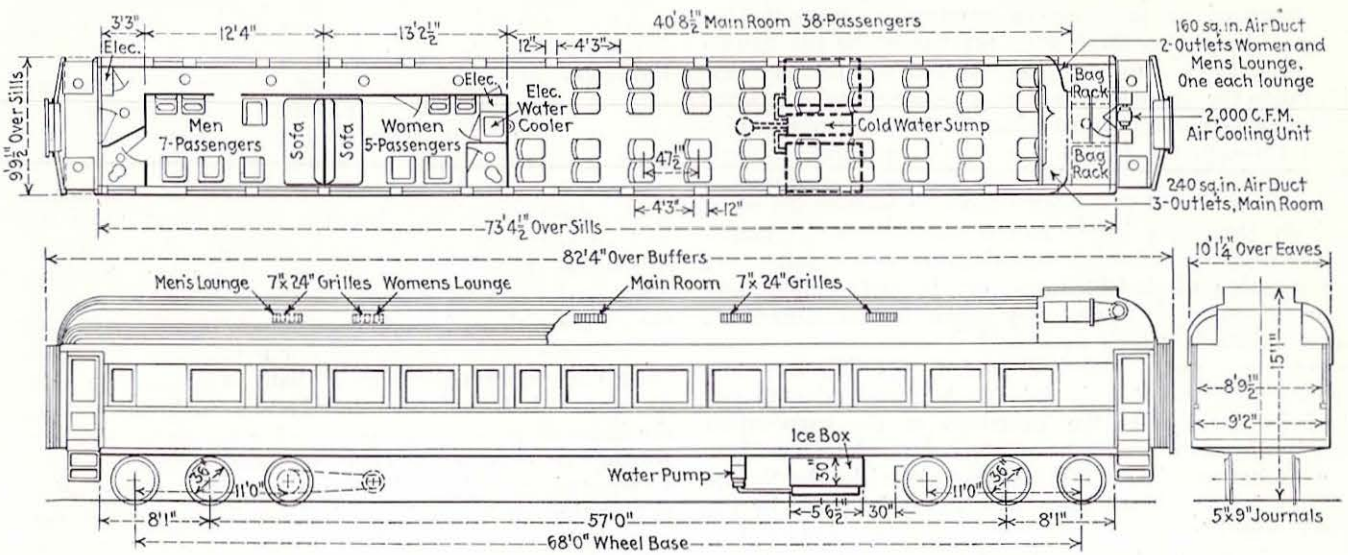
To reinforce the conventional car heating system in the cars of the "400" and to furnish heating facilities for mild weather, steam is admitted through a Vapor regulator and controls to part of the overhead coils in the air-conditioning unit. These coils temper the chill of fresh air drawn into the car, thus avoiding objectionable cool drafts. This auxiliary heating system is cut in at temperatures between 71 and 74 deg. F. The thermostatic control devices, as well as regulating valves and metallic connections between cars, are of the Vapor type.

Decorative Treatment in Individual Cars

The passenger-baggage car is 70 ft. 3 in. long over the end sills, seats 50 in the passenger compartment and has a baggage length of 29 ft. The passenger compartment is decorated in three shades of gray with tan trim and black seat end caps and window capping. The Heywood-Wakefield seats are re-upholstered and re-sprung, giving the new individual cushion effect. Seat covering material is of Chase plush in brown color. Pantasote window curtains are provided in a special pattern with two shades of brown. The aisle strip is tan and buff asbestos tiling, comprising 3-in. squares laid diagonally with 2½-in. buff edging. No change was made in the electric lighting. A Giessel drinking water cooler and an Ajax recess cabinet for individual drinking cups are installed. Toilet facilities include hot and cold wash water supplied through a Vapor mixing valve located beneath the Crane wash stand and soap dispenser.

The standard coach is 54 ft. 2 in. long, seating 60. The seats and the curtains are of the same type as provided in the passenger-baggage car. The floor is entirely covered with Johns-Manville asbestos tiling, tan and buff, comprising 6-in. squares laid diagonally. Hot and cold water is provided in a toilet room in each end of the car. The air-conditioning system in this car has four 8-in. by 40-in. outlets equipped with Uniflo grilles through which conditioned air passes from the distributing air ducts into the passenger compartment.

The lounge coach is 73 ft. 4½ in. long, seats 38 passengers in the main compartment, 6 in the women's lounge and 7 in the men's lounge, or a total of 51. The rotating seats in this car, provided by the Coach & Car Equipment Company, are of the individual bucket-type with adjustable reclining backs. Floor covering consists of J-M 6-in. squares of green and black marbelized tile laid diagonally. The car interior is finished in three tones of old rose, stippled on aluminum, with the clerestory stippled ivory. All chairs are upholstered in an old rose flowered design, with the exception of chairs in the men's lounge which are upholstered in green leather. Both lounge rooms are equipped with fern-green lavatories and soap dispensers furnished by the Crane Company and Duner-type hoppers are provided. The lighting system is indirect, 76 bulbs (15-watt) being provided in the main compartment, 20 in the women's lounge and 24 in the men's lounge. This light is supplemented by 6 overhead hallway lights and 3 side-wall bracket lights at the lavatories in each lounge room. All trimmings throughout the car are chrome-plated. A Frigidaire electric water cooler is installed. Special hand baggage racks are provided on either side of the passageway at each end of the car.



Plan and Elevation of the Modernized Lounge Coach, Provided with Ice-Activated Air-Conditioning Equipment

The dining car is 73 ft. long, 15 ft. 11 in. being devoted to the kitchen, 6 ft. 3 in. to the pantry, 5 ft. to the steward's section and 38 ft. 7 in. to the main dining room, which has a seating capacity of 36. The chairs are upholstered in light brown leather. The window curtains are of Pantasote. The carpet in the main dining room is in two tones of brown, being laid over Pneu-Pad sponge rubber carpet padding. The diner hallways are covered with 6-in. squares of asbestos tiling laid diagonally in two shades of tan and buff. Conditioned air is admitted to the dining room through three 4-in. by 24-in. Uniflo grilles in the clerestory.

The parlor car embodies the same color scheme as described, with the exception that brown trimmings are used. The car is 70 ft. long and has a total seating capacity of 42 which includes 23 individual chairs in the main parlor sections, 2 sofas in the men's room and 11 seats in the smoking room. The floor covering car-

pet in the body of the car is in two shades of brown. Upholstery is provided in shades of brown and green with five different patterns and combinations of colors.

The observation-parlor cars, Odin and Viking, are furnished (one for each train) by the Pullman Company. They are 78 ft. 3½ in. long and having a total seating capacity of 36. This includes 12 in the head-end compartment, 11 in the observation end, 5 in the drawing room and 8 in the solarium. These cars are cooled with the Pullman ice-activated system. They are finished in shades of green with green upholstery and cream ceiling. A Philco radio is provided in the rear parlor compartment.

More R. F. C. Loans Authorized

WASHINGTON, D. C.

BROAD additional powers for the Reconstruction Finance Corporation and the Interstate Commerce Commission to aid in the financing of railroads, for purposes of reorganization, consolidation, maintenance, construction, or purchase of equipment, are provided in amendments to the R.F.C. act passed by the Senate on January 25 and by the House on January 29. Through the amendments a new opportunity is opened to the railroads to acquire a large amount of new equipment through the purchase of their equipment obligations by the R.F.C. At the same time these government institutions would be given power to participate more actively than ever before in the executive management of the roads by imposing conditions as to reorganization, amortization of indebtedness, or, in fact, almost any phase of management that may appeal to their discretion, upon railroads which may find it necessary to obtain government aid. The bill passed, S.1175, was one proposed by the R.F.C. and the Administration to extend for two years the functions of the corporation which otherwise would have expired on January 31.

A limitation of $350,000,000 was placed by the Senate on additional railroad loans which may be made by the R.F.C., which at the end of the year had outstanding $376,555,435 to 58 railroads or receivers, after repayments had been made in the amount of $70,727,837. Of the total, $105,221,065 had been loaned since March 4, 1933. However, the bill was passed by the House without this limitation, so that an opportunity was left for it to be eliminated in conference.

The bill carries out suggestions made by Jesse H. Jones, chairman of the R.F.C., in a report to Congress, in which he said "it is not our thought even to approach railroad ownership, but with some further loans and probably some limited guarantees, we can help very materially in reorganizations and consolidations."

One result of the amendments is expected to be the transfer of the function of making loans for maintenance and equipment from the Public Works Administration, which has loaned approximately $200,000,000 for such purposes in the past year or so, to the R.F.C. This would mean the establishment of a new set of rules and conditions governing such loans, as the R.F.C. and the I.C.C. have power to prescribe them, and both Chairman Jones and the President have held out some prospect of a slightly lower interest rate than the 4 per cent now charged by the R.F.C. and also by the P.W.A. after the first year. One plan said to be under consideration proposes that the R.F.C. shall purchase for the account of some railroads bonds which are quoted at a low figure.

As passed by the Senate the bill extends the functions of the corporation for two years, or until February 1, 1937, and authorizes it to make loans, or renewals or extensions thereof, to mature not later than January 31, 1945. It is provided that in respect of loans or renewals or extensions of loans or purchases of obligations under section 5 of the R.F.C. act, "to or of railroads, the corporation may require as a condition of making any such loan or renewal or extension for a period longer than five years, or purchasing any such obligation maturing later than five years from the date of purchase by the corporation, that such arrangements be made for the reduction or amortization of the indebtedness of the railroad, either in whole or in part, as may be approved by the corporation after a prior approval of the Interstate Commerce Commission."

Section 5 of the R. F. C. act, under which loans have been made to railroads, is further amended to provide that "Within the foregoing limitations of this section, the corporation, notwithstanding any limitations of law as to maturity, with the approval of the Interstate Commerce Commission, including approval of the price to be paid, may, to aid in the financing, reorganization, consolidation, maintenance, or construction thereof, purchase for itself, or for account of a railroad obligated thereon, the obligations of railroads engaged in interstate commerce, including equipment trust certificates, or guarantee the payment of the principal of, and/or interest on, such obligations, including equipment trust certificates, or, when, in the opinion of the corporation, funds are not available on reasonable terms through private channels, make loans, upon full and adequate security, to such railroads or to receivers or trustees thereof for the purposes aforesaid: Provided, That in the case of loans to or the purchase or guarantee of obligations, including equipment trust certificates, of railroads not in receivership or trusteeship, the Interstate Commerce Commission shall, in connection with its approval thereof, also certify that such railroad, on the basis of present and prospective earnings, may reasonably be expected to meet its fixed charges, without a reorganization thereof through judicial reorganization, except that such certificate shall not be required in case of such loans made for the maintenance of, or purchase of equipment for, such railroads: And provided further, That for the purpose of determining the general funds of the Corporation available for further loans or commitments, such guarantees shall, to the extent of the principal amount of the obligations guaranteed, be interpreted as loans or commitments for loans: Provided further, That the total amount of loans and commitments to railroads, receivers, and trustees, and purchases and guarantees of obligations of railroads, under the paragraph, as amended, shall not exceed at any one time $350,000,000."

Senator Couzens had proposed placing a limitation of $100,000,000 on the amount of railroad loans to be made under the new bill, so that the bill at least could go to conference in that form, but accepted the suggestion of Senator Fletcher that the limit on additional loans be placed at $350,000,000 in addition to somewhat less than $400,000,000 now outstanding.

The R. F. C. act was also amended in the section authorizing industrial loans to the amount of $300,000,000 by striking out the words "adequately secured," and substituting "so secured as reasonably to assure repay-

(*Continued on page 195*)

Wood-Preservers Meet in New York

Convention considers means of perfecting processes for treatment of timber for railway and other uses

THE review of 35 years' practice in the treatment of crossties by the Chicago, Burlington & Quincy, and of 45 years' experience with treated timber in bridges on the Southern Pacific, and the presentation of practices to be followed in the treatment of piles and timbers in tidewater structures to protect them against the attacks of decay and marine borers constituted high points in the thirty-first annual convention of the American Wood-Preservers Association in New York City on January 22-24. Sessions of the convention, which were attended by 185 members and 79 other persons interested in the treatment of timber, were presided over by S. R. Church, president, consulting engineer, New York.

At the concluding session, officers were elected as follows: President, Frank D. Mattos, manager treating plants, So. Pac., West Oakland, Cal.; first vice-president, R. S. Manley, president, Texas Creosoting Co., Orange, Tex.; second vice-president, F. C. Shepherd, consulting engineer, B. & M., Boston, Mass.; treasurer, H. L. Dawson, re-elected; members executive committee, B. M. Winegar, Canada Creosoting Co., Montreal, Que.; W. R. Goodwin, engineer wood preservation, M. St. P. & S. S. M., Minneapolis, Minn. Memphis, Tenn., was selected as the city for the next annual meeting.

Reports of Committees

As heretofore, many of the reports and papers dealt with the technique of timber preservation. Others of more direct interest to railway officers are abstracted below. Two papers—that on the Burlington's experience with treated crossties by H. R. Clarke, engineer maintenance of way, C. B. & Q., and that on the protection of piling against marine borers by Dr. Hermann von Schrenk, consulting timber engineer, St. Louis, Mo., will appear in later issues.

With the acceptance of the report of the Committee on Preservatives, of which R. E. Waterman, chemist, Bell Telephone Laboratories, was chairman, final action was taken by the association in the adoption as standard of revisions of the Specifications for Creosote Oil for Ties and Structural Timbers and of the Specifications for creosote-coal-tar solution for Ties and Structural Timbers. These two propositions which were submitted by the committee last year and adopted tentatively, embody the withdrawal of grades 2 and 3 creosote oil from the creosote specifications and the withdrawal of a footnote from the creosote-coal-tar specifications which placed certain limitations on the use of that preservative that no longer hold. This action serves also to reconcile minor differences between the association's specifications and those of the American Railway Engineering Association and the American Society for Testing Materials.

In a brief report by the Committee on Diversified Uses of Treated Wood, of which E. P. Gowing of the American Creosoting Company was chairman, a recommendation was offered to the effect that lumber and timber for interior use, which have been treated with zinc chloride, should be dried by air seasoning or kiln dried to have a moisture content of not more than 25 per cent, before installation.

Further progress in the investigation of the resistance of creosoted piles to destruction by teredo and limnoria was reported by the Committee on Marine Piling Records, of which M. F. Jaeger, of the Port Reading creosoting plant of the Reading-C. R. R. of N. J., was chairman. In the main, the report comprised a compilation of observations made in the inspection of 10 docks, bridges and other tide-water structures between Seattle, Wash., and Charleston, S. C., including a number constructed and maintained by railways.

Studies on the rate of temperature changes in Douglas fir were reviewed in a paper by J. D. MacLean, senior engineer, Forest Products Laboratory, Madison, Wis. In 1930, 1932 and 1934, Mr. MacLean reported the results of similar studies in which the wood was steamed, whereas, the present paper was concerned with the results when creosote is used as the heating medium. According to his paper, the boiling process will remove a large amount of water, but the total quantity removed from unincised heartwood timbers is very limited. Although the Boulton (boiling in creosote) process is effective in reducing the moisture content, the studies indicate that its principal value in improving absorption and penetration in green heartwood Douglas fir lies in the heating effect rather than the seasoning effect.

The report of a committee on the Use of Creosoted Wood in Residences or Other Buildings, of which George M. Hunt, Forest Products Laboratory, Madison, Wis., was chairman, presented conclusions based on replies to a questionnaire designed to bring out experience with creosote-impregnated wood in structures where the odor of the creosote might prove objectionable. The information obtained was based on experience with creosoted wood in sills, joists, subfloors and other members not exposed to view in occupied parts of the building. The replies covered observations on 273 buildings, including a number of railway structures such as stations, bunk houses, tool houses, etc. The majority of the replies received state that no odor was noticed or that the odor disappeared in a short time. Usually the occupants of the building did not consider the odor objectionable. On the other hand, a few cases were reported where the odor persisted longer than three months, and two replies reported that serious trouble had occurred as a result of creosote bleeding from the wood and dripping into the basement of the building, or staining flooring or plaster.

Poles

The Committee on Pole Service Records of which H. A. Haenseler, Western Union Telegraph Company was chairman, presented data on nine pole lines in the United States and three in Canada on which rather complete information has been compiled since their installation. Of those in the United States, which are all of creosoted poles, two have attained a sufficient age to develop pertinent data. Thus, of 1,969 southern pine poles treated with 12 lb. of creosote by the full-cell process and set in a line of the Duke Power Company in 1913-1914, 117 or 6 per cent had been removed on account of decay by 1920, and 403 or 20 per cent, by 1934. A service record of 19 years is available in a

Western Union line along the Illinois Central north from New Orleans that was installed in 1915-16, using piles of similar description and treatment as in the line noted above. Of 415 poles set in two five-mile sections of this line none has been removed on account of decay but nine were removed for other causes, while of 200 poles that were inspected by excavation to a depth of 12 in. below the surface, 20 had light decay and 2 showed heavy decay.

Based on study of six pole lines in the states of New Jersey, Minnesota and Wisconsin, over a period of five years, the Committee on Pressure Treatment of Poles (J. D. Burnes, engineer wood preservation, Page & Hill Company, chairman) reached the conclusion that ground-line checks are not a serious cause of failures in incised-treated poles in the territories covered by the investigation. The committee, however, recommended a continuation of the investigation over a larger area, and submitted a form for the reporting of field studies.

Tie Service Records

The Committee on Tie Service Records, (W. R. Goodwin, engineer wood preservation, Soo Line, chairman) presented its annual tabulation of tie renewals on 27 railways, showing the average renewals per mile and the "five-year-averages" for the years 1911 to 1933, inclusive, as well as the corresponding figures for the combined mileage of these 27 roads. The figures for 1933 are reproduced below:

Railway	Average Renewals Per Mile 1933	Five Year Average
A. T. & S. F.	76	120
B. & O.	73	91
B. & M.	75	165
C. R. R. of N. J.	45	72
C. & E. I.	92	104
C. & O.	85	132
C. B. & Q.	64	125
C. I. & L.	63	108
C. C. C. & St. L.	61	77
C. M. St. P. & P.	133	207
C. R. I. & P.	45	95
D. L. & W.	48	66
G. N.	40	149
I. C.	96	150
K. C. S.	121	146
L. V.	63	56
M. C.	34	68
M. St. P. & S. S. M.	169	193
M. K. T.	98	138
N. Y. C. (East)	57	91
N. Y. C. (West)	40	55
N. P.	96	114
Penna.	50	89
Reading	24	80
S. P. Atl. Sys.	81	134
S. P. Pac. Sys.	57	133
U. P.	86	112
All 27 Roads	73	120

In addition to the tie renewals record, the committee presented tabular summaries of data obtained in the 1933 inspections of test tie installations of the Burlington, the Lackawanna, the Santa Fe and the Rock Island and a progress report of a test being conducted on 3,800 ties in a track of the Milwaukee at Madison, Wis.

Treated Timber in Bridges on the Southern Pacific

By George W. Rear*

The Southern Pacific Company is a pioneer in the use of creosoted timber and in the development of suitable methods for the treatment of Douglas fir. Its first creosoting plant was constructed in 1889, although creosoted material had been in use for some years before that date. At the convention of the Association of Railway Superintendents of Bridges and Buildings in New Orleans, La., in 1895, D. K. Colburn, bridge engineer of the Southern Pacific, lines east of El Paso, Texas, stated that he had installed the first creosoted timber in that section in a ballast deck structure about 20 years previously. The object in going to this construction was, he said, to provide a continuous track and prevent the jump at the end of each little opening, as there are no bridges in that section of swamp country on which the approaches can be kept up without continuous work.

The discussion at that convention in 1895 shows the attitude of the Southern Pacific 40 years ago. This early recognition of the advantages of the ballasted-deck type of trestle indicated the foresight of the men responsible for the structures so long ago. Time has verified the truth of their prophecy as to maintenance. Records indicate that by 1895 the Southern Pacific Lines had built more than 50,000 lin. ft. of such trestles; many of them are still in service and are in such good condition that they will last for many more years. Some of them have had to be rebuilt because they were too light for present loadings, but in general, the structures were found to be in good physical condition when dismantled.

In the early Nineties, standard plans were prepared for creosoted culvert boxes in various sizes, and with only a few small changes these standards are still in effect. Several thousand such boxes, including many of the earliest installations, are in service. Few of them have been removed on account of decay, and such boxes are considered to be among the permanent types of culverts and are very economical.

At about this same time, standard plans were developed for creosoted woodstave pipe culverts. Many of these culverts, up to four feet inside diameter, were placed in service, none of which has been replaced by reason of decay. However, this type of culvert had a tendency to flatten down and bulge out, and while most of them have remained in service in this distorted condition without actually collapsing, many have had to be renewed to prevent failure.

Until about 1889, wharf structures in sea water were constructed with untreated piles of Douglas fir, Redwood and other timbers. The piles were driven with the bark on and with various coverings and coatings, but with only partial success. With the use of creosoted piling, the troubles with marine borers became of small moment, although it took considerable time to learn the care necessary to prevent injury to the timber and to demonstrate how small a puncture would permit borers to enter.

That the first treatment in Southern Pacific plants was successful is shown by the fact that when the piles driven in Oakland Long Wharf in 1890 were removed in 1919, after 29 years' service, most of them were fit for redriving in salt water. The water at the location of this wharf is so badly infested with borers that untreated piles are destroyed in about two years. Most of the 14,000 piles removed from this wharf were redriven for land structures and will give long additional service in their new locations.

As the advantages of creosoted timber structures had been proved so early in the Southern Pacific Company's experience, it is only natural that they would be used for many purposes. An effort will be made to outline a number of these uses, with such notes as occur to the writer as the list develops.

(1) *Piling for all types of structures*—This is probably the best use to which creosoted material can be put. The writer favors a full-cell treatment for both land and marine use. It is regular practice on the Southern Pacific to drive creosoted piles as foundation piles under bridge piers, abutments and buildings, where

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the cutoff is above the moisture line. Investigation of such piles after 30 years' service fails to show any deterioration.

(2) *Trestle caps*—Experience indicates that caps are more subject to failure than any other part of a well-designed trestle, and that failure generally results from splitting, due to season checks. For trestles on heavy-traffic lines, it is good practice to purchase caps of side-cut material, eliminating boxed hearts. Such material costs more, but the additional cost is believed to be justified.

(3) *Trestle stringers*—It is Southern Pacific practice to use Douglas fir stringers exclusively on its Pacific Lines, and to a considerable extent on its lines east of El Paso. The standard size is 8 in. by 17 in. by 30 ft. in length. In designing new structures, stresses are limited to 1,200 lb. per square inch, although heavier traffic is permitted on existing structures until stresses reach about 1,650 lb.; under this practice no failure of stringers had been experienced.

On the early ballasted-deck trestles, a solid deck of 12-in. by 12-in. stringers was placed, but this was not entirely satisfactory as there was more or less movement of the stringers under traffic and the finer ballast worked in between the stringers, spreading them apart. This led to the use of a covering of 3-in. planks, laid crosswise of the stringers.

(4) *Culverts*—No changes have been found desirable in the design of our standard box culverts since they were first used in the Nineties, and it is regular practice to apply creosoted wood in boxes 1 ft. by 2 ft., 2 ft. by 3 ft. and 3 ft. by 4 ft. in dimension. In special cases, larger wooden boxes have been built, some as large as 12 ft. by 12 ft. On new lines it is considered good practice to install wooden boxes of larger size than actually required, with the intention of inserting more permanent culverts of smaller size at a later date. If the wooden boxes are preframed and creosoted, they will be almost as permanent as those of any other type. Liability of fire is the only objection to them. Wooden stave pipe culverts are no longer installed.

(5) *Truss bridges*—The Southern Pacific has installed a number of creosoted truss railroad bridges of moderate length and is securing long life from them, but for present-day traffic a timber truss is objectionable on other grounds than decay and it is probable that we will build no additional creosoted trusses for railroad purposes. Such bridges are very satisfactory for carrying highways over tracks and many are in use. The present practice of providing an asphaltic wearing surface on the floors of highway bridges has added greatly to their economy.

More R. F. C. Loans Authorized

(*Continued from page 192*)

ment of the loans," but the law still requires that the railroad loans be "adequately secured."

The new language as to I. C. C. approval, requiring an affirmative finding that the carrier may reasonably be expected to meet its fixed charges, takes place of a previous provision that it should not approve a loan from the R. F. C. if it was of opinion that such carrier "is in need of financial reorganization in the public interest."

This restriction does not apply to loans for the maintenance or purchase of equipment, on the theory that equipment itself affords security, and, without the limitation on the total amount of loans, possibilities would be created for the financing of a large amount of equipment, as the R.F.C. appropriation could be used as a revolving fund increased from time to time by the sale of equipment trusts in the market, just as it has marketed several such issues for the P.W.A. Some of the government officials who are reluctant to approve further loans to railroads for such things as interest and taxes that they are unable to earn at present are more inclined to favor loans that will enable such roads to reduce expenses or increase earnings by purchasing new and especially "modernized" equipment.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended January 19 totaled 562,955 cars, an increase of 9,280 cars as compared with the week before and of 1,053 cars as compared with the corresponding week of last year. This was also an increase of 63,401 cars as compared with 1933. Increases as compared with last year were shown in the loading of miscellaneous freight, coal and forest products, but grain, live stock, and ore showed decreases both as compared with the week before and as compared with last year. The summary, as compiled by the Car Service Division of the Association of American Railroads, follows:

Revenue Freight Car Loading

Week Ended Saturday, January 19, 1935

Districts	1935	1934	1933
Eastern	136,242	128,256	114,239
Allegheny	110,996	112,107	93,082
Pocahontas	40,373	39,829	36,844
Southern	85,041	87,481	79,961
Northwestern	62,720	64,649	56,652
Central Western	80,385	83,154	74,122
Southwestern	47,198	46,426	44,654
Total Western Districts	190,303	194,229	175,428
Total All Roads	562,955	561,902	499,554
Commodities			
Grain and Grain Products	25,182	32,188	26,891
Live Stock	14,941	18,046	17,675
Coal	137,600	129,016	113,422
Coke	8,075	8,347	5,400
Forest Products	20,722	19,680	14,839
Ore	2,820	3,202	2,298
Merchandise L.C.L.	152,373	160,526	160,242
Miscellaneous	201,242	190,897	158,787
January 19	562,955	561,902	499,554
January 12	553,675	557,266	509,893
January 5	498,073	500,813	439,469
December 29	.....	425,120	454,765
December 22	.....	547,895	531,464
Cumulative Total, 3 Weeks	1,614,703	1,619,981	1,448,916

Car Loading in Canada

Car loadings in Canada for the week ended January 19 totaled 40,405. Complete returns from the western division are not available so this total should be increased by around 350 cars which would bring the total to approximately the same as in 1934 and also as in the previous week, according to the weekly statement of the Dominion Bureau of Statistics:

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
January 19, 1935	40,405	20,784
January 12, 1935	40,790	21,209
January 5, 1935	33,917	18,542
January 20, 1934	40,775	20,463
Cumulative Totals for Canada:		
January 19, 1935	115,112	60,535
January 20, 1934	116,526	60,269
January 21, 1933	92,358	50,006

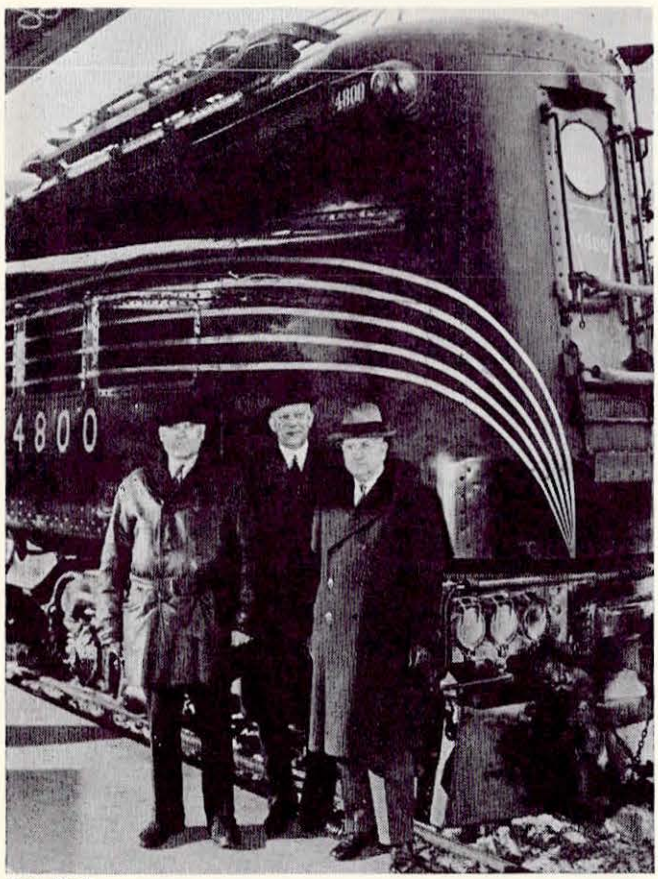
First Washington-Philadelphia Electric Train on Pennsylvania

A PARTY of 128 government and railroad officials and newspaper men were treated to a speed of 102 miles an hour for part of the run on the first Pennsylvania electric train to operate out of Washington on January 28, drawn by the new streamlined electric locomotive No. 4800, type G G-1, which was especially designed for this service.

The test run was made from Washington to Philadelphia and return, with a nine-car train, including a combined passenger and baggage car, two passenger coaches, one Pullman compartment car, three parlor-lounge cars, a diner, and an observation car. For the entire trip the average speed was approximately 74 miles an hour, and the return from Philadelphia, 135 miles, was made in 1 hr. 50 min., with a stop of about five minutes at Baltimore, breaking the record set in 1927 with a locomotive and one baggage car carrying photographs to New York after Charles A. Lindbergh's reception in Washington following his trans-Atlantic flight.

102 M.P.H. Speed Attained

From Baltimore to Washington the trip was made in 32 minutes, and the speed of 102 miles an hour was made between Seabrook, Md., and Landover. Passenger service over the electrified line between Washington and New York is expected to begin about February 10, gradually building up to complete service about March 15, and freight service with electric locomotives will be started shortly afterward. Electric service has been in operation between New York and Wilmington for more than a year.



Acme Photo

Before the Start—Left to Right Are Shown C. G. Wilcox, P. R. R. Road Foreman of Engines, P. R. R. Vice-President M. W. Clement and Secretary of Interior H. L. Ickes Standing Alongside the New Pennsylvania Streamlined Electric Locomotive Which Hauled the Train

Government Officials Aboard

The guests included Secretary Ickes, Public Works Administrator; Frank C. Wright, director of the railroad loan division, and other officials of the P.W.A., which had made a loan to the Pennsylvania in December, 1933, to complete its electrification work between Washington and Wilmington; Commissioners Tate, Lee, Miller, and Porter, of the Interstate Commerce Commission, and city officials from Washington, Baltimore and Philadelphia. Many of the Pennsylvania officers also made the round trip, including Vice-Presidents M. W. Clement, J. L. Eysmans, A. J. County, F. J. Fell, Jr., C. D. Young, J. F. Deasey, and W. S. Franklin.

No especial effort was made to attain high speed and it was stated that the locomotive had previously been operated in a test up to 120 miles an hour The cars rode so smoothly that for most of the time many of the guests did not notice the speed being attained until informed later.

Vice-President Clement, in a brief talk over the radio from the train side, said that Washington will shortly be only three and one-half hours by rail from New York, and it is understood that even faster time may be announced after the regular service is in operation. Important savings in time will also be made on freight service from the South. "The operation of this train represents a great deal more than the completion for service of the electrification of the Pennsylvania Railroad between Washington and New York," Mr. Clement said. "It represents the faith of this railroad not only in rail transportation, but in the future of our country.

"The operation of this train marks the completion of a really great undertaking through the joint co-operation of the government, through Secretary Ickes, and the Railroad. In a year's lapse of time, through perfect co-operation without any friction, a smooth-running army of railroad employees numbering thousands, backed by many more thousands in industry, have again come through in the American way—on time.

"We are happy to have this opportunity to express our appreciation to the Administration for the pleasure we have had in working with them, and in their having made the completion of this project possible."

Public Works Administrator Harold L. Ickes said: "Departure of this train establishing electrified railroad service between the nation's capital and the nation's largest metropolis for the first time is an achievement. It not only shows what can and should be done under the President's recovery program but demonstrates what actually has been accomplished under PWA when private initiative aids the Administration in carrying out re-employment plans.

"This Pennsylvania PWA project is said to be the greatest private construction job in the world carried forward during the past year. The railroad co-operated with the President and PWA to the fullest extent and in every possible way in the drive to take men off the relief rolls and put them back on honest work payrolls through application of the public works theory of national industrial recovery.

"PWA loans to the Pennsylvania have created nation-wide re-employment. The company has called back to work thousands of its own employees who were laid off during the depression. Many more thousands of men and women were called back to work to produce the

Government Officials and Officers of the Pennsylvania Aboard the Train

Left to right: A. J. County, P. R. R. vice-president in charge of finance and corporate relations; H. M. Tate, chairman of the Interstate Commerce Commission; G. E. Payne, P. R. R. system publicity representative; M. W. Clement, vice-president of the P. R. R.; Secretary of Interior H. L. Ickes; Frank Wright, director of P. W. A.'s Transportation division; Gilbert Nettleton, P. R. R. general agent at Washington, D. C.; A. B. Smith, P. R. R. general passenger agent at Washington

Acme Photo

vast quantities of materials, supplies and equipment purchased. In addition to the vast re-employment benefits resulting from the construction work done, the Pennsylvania has made great improvement in its property that will enable it to give faster and better service to the public."

While it is now possible to operate trains all the way from New York to Washington on the electrified system the project is not yet finished and much employment will still result from the PWA allotment.

PWA loaned the Pennsylvania a total of $80,650,000 a year ago for its construction program, $37,000,000 being for completing electrification of its line between New York and Washington, $17,000,000 for building 7,000 new freight cars, $23,000,000 for building 100 new electric locomotives and $3,650,000 for purchasing 100,000 tons of new rail.

"There is probably no stretch of railroad in America where electricity is capable of doing more to improve the service and increase the efficiency of operation than on the Pennsylvania's line between New York and Washington," according to a statement issued by the railroad company.

"The density of traffic moving over this route is indicated by the fact that, even under the present generally inactive conditions of business, the initial complete electric operation will embrace 686 daily trains—639 passenger and 47 freight. Including those of the multiple-unit type, in which the cars themselves carry the motors and no locomotive is required, these trains will cover a total of more than 34,700 miles each 24 hours while the daily electric engine runs will exceed 32,000 miles.

"The unusual character of the passenger patronage in this area renders the future outlook for schedules even faster than the present a matter of great importance. The freight traffic is also of vital character, including as it does enormous quantities of fresh fruits and vegetables from the South to the great markets north of the Potomac river and east of the Allegheny mountains. Prompt delivery of this freight is essential to meet the requirements and customs of the trade. The greater speeds made possible by electric operation will not only permit quicker schedules but insure a much higher degree of dependability of arrival.

"It is important to realize that the faster schedules possible under electric operation are by no means due entirely to the faster maximum speeds of which the newest types of electric locomotives are capable. An electric engine, by simply drawing additional current through the overhead conductor from the reserve of power available at the power house, has the very important capacity of making ordinary up-grades at practically the same speed as on level track, or for that matter as on descending grades. Steam locomotives do not have this flexibility. Electric power therefore produces much more evenly sustained speeds.

"In addition, electric engines gain speed, or 'accelerate,' much more quickly than steam, especially with heavy trains. As a result less time is lost after stopping or reducing speed for any reason.

"These two factors together make it possible, with electric equipment, to achieve a seeming paradox, namely, shorten both passenger and freight schedules very materially without exceeding the present maximum speeds or the special speed restrictions necessitated by operating conditions at various points.

"The still higher top speeds of which the new electric locomotives are capable constitute an additional resource which may be drawn on in the future if further quickening of the runs is found desirable."

A Stainless Steel Streamlined Train to be modeled after the Burlington's "Zephyr" is now under construction at Genoa, Italy, and 60,000 lb. of stainless steel to be used in its building have been purchased from the Allegheny Steel Company, Brackenridge, Pa. The new Italian train, which is being built by Piaggio, Inc., will consist of three cars and like the "Zephyr" will utilize the Shot-Weld process of construction, perfected by the Edward G. Budd Company, Philadelphia, Pa., whose engineers will supervise the building of the train.

Legislative Program Recommended By Eastman

Regulation of motor and water carriers—Reorganization of I. C. C.—Permanent Co-ordinator—Dismissal compensation—Revision of bankruptcy law

WASHINGTON, D. C.

DRAFTS of nine bills constituting a comprehensive plan for improving transportation conditions under private ownership, "not quickly but only gradually," by extending federal regulation to highway and water carriers and paving the way for co-ordination of all important forms of transportation, have been submitted by Co-ordinator Eastman with a report transmitted to the President and Congress, and made public on January 30. The program includes a reorganization of the Interstate Commerce Commission with 16 members and the establishment of a permanent Co-ordinator of Transportation, with authority over motor and water carriers, as well as railroads, revision of the bankruptcy law, a system of dismissal compensation for employees, and several amendments of the interstate commerce act relating to railroads, including modification of the long-and-short-haul clause.

All but one of the commissioners disapproved the plan for a reorganization of the commission and for a separate co-ordinator and no opinion was expressed as to the labor proposal, but the other bills were endorsed in principle by most of the commissioners and they urged "speedy adoption" of the plan for regulating motor and water carriers.

The nine bills, five of which Mr. Eastman says might well have been included in a single bill and should be considered together, constitute what the report describes as Plan I, which he recommends under present conditions in preference to any more radical program. If it does not prove successful, and he says the key to its success would largely be in the hands of the railroad managements, although partly dependent also on general business conditions, either Plan II, large-scale unifications such as proposed in the Prince Plan, or Plan III, government ownership and operation, "will be inevitable and the probabilities lie with the latter."

The latter plan, in the opinion of the Co-ordinator, "contains the greatest potentialities of good and at the same time the greatest possibilities of harm," while "Plan I has neither the potentialities for good nor the possibilities of financial harm of Plan III" but "there are certain special dangers under present abnormal conditions," and "it would be dangerous to take so far-reaching a step until the country is prepared to welcome it."

I. C. C. Not In Accord With Some Features

There are no particular surprises in the report and its recommendations and much of its language follow closely the ideas frequently expressed by the Co-ordinator in public addresses and in his reports of last year. He proposes to end the present "jug-handled" situation under which railroads are strictly regulated by the federal government while their competitors are not, but he finds that "railroad methods must be changed radically, and in the direction of co-operation, collective action, and co-ordination."

The permanent co-ordinator is to work with them as a representative of the government in accomplishing this change, with some power to issue orders in reserve, and is also to work with organizations representing the other carriers, partly in the capacity of code administrator, in an effort to bring about greater co-ordination and stabilization of all forms of transportation. This feature of the plan is objected to by the commission on the ground that the railroads "should at least be permitted to attempt to demonstrate the efficiency of the organization which they have created," (the Association of American Railroads) and that other carriers could be required to organize similarly, possibly with government participation and supervision, centered in the I. C. C. The commission also gives many reasons for opposing the reorganization plan proposed.

Co-ordinator Eastman conferred with the President on the plan on Monday and the President has promised to send a message to Congress on the subject at an early date. He has already expressed his approval of "consolidation of federal regulatory administration over all forms of transportation." No changes are proposed at this time in laws relating to consolidations and recommendations as to transportation subsidies are deferred because the report on that subject has encountered delays.

President Roosevelt said on Wednesday that Mr. Eastman's report, that of the aviation commission which he has already sent to Congress, and the report of the committee which has been studying the subject of aids to ocean shipping, to be sent within a week or so, all support the general theory toward which the Administration has been heading of bringing about a consolidation of regulation of all transportation so far as quasi-judicial functions are concerned in one body. All of the reports should be considered together, he said, and out of it all it is expected to develop a general transportation bill.

The report includes 165 typewritten pages in Volume I and 240 pages of appendix in Volume II, including the text of the bills and some detail discussion of their purpose.

Summary of Recommended Plan

In Mr. Eastman's language, Plan I proposes in brief:

1. To extend Federal regulation over all important forms of transportation, and to co-ordinate this regulation under a single agency, the Interstate Commerce Commission.

2. To reorganize the Commission so that specialized attention may be given to the peculiar problems of each form of transportation, but with a co-ordinated control of basic policies; so that administration and procedure may be improved; and so that deliberations by too large and unwieldly a body of men may be avoided.

3. To associate with the regulatory functions of the Commis-

sion planning, prevention, and co-ordination, these latter functions to cover the entire transportation field and to be administered by a single commissioner, known as the Co-ordinator of Transportation, operating independently for the most part but linked with the regulatory branch in certain respects.

4. To make reasonable provision for superannuated employees of the railroads and to afford reasonable protection to those who are displaced by labor-saving improvements.

5. To improve the statutory procedure governing the bankruptcy and reorganization of the railroads.

6. To amend in minor respects the provisions of the Interstate Commerce Act relating to the regulation of the railroads.

7. Possibly to provide legislation for the correction of the subsidy situation, and also labor conditions of the transportation agencies other than the railroads.

Certain features of Plan I, he says, would in general substance also be parts of Plan II and Plan III. These features are co-ordinated regulation of other important forms of transportation; the reorganization of the commission, including the establishment of the office of Co-ordinator; reasonable protection of labor in connection with superannuation and labor-saving improvements; and any legislation which may later be recommended for the correction of the subsidy situation or of the labor conditions of transportation agencies other than the railroads. Revision of the bankrutpcy act would probably be desirable, although less important, as a part of Plan II.

The essential differences in the plans center around the problems of rehabilitating the physical condition and credit of the railroads, promoting the modernization of their properties, and securing the collective action or co-ordination which is necessary in dealing with various important phases of service, operation, and management, if the economy and efficiency are to be attained which will enable the service to be given and the rates to be charged that will develop the most traffic and yield the largest revenues.

Plan I deals with these problems primarily by encouraging the railroads, and also the other carriers, in every way to undertake such collective action voluntarily with help and stimulus from the Co-ordinator of Transportation, and by giving him the power to issue orders if necessary. It proceeds on the theory that actual consolidation of railroads is not essential to such collective action, but that through appropriate organization of the industry and with government help it is possible for independently-owned railroads to get together and deal effectively with these matters of common concern, continuing to deal separately with all matters of local and individual concern. The co-ordination contemplated does not carry with it the elimination of competition, but rather the elimination or reduction of the wastes which have been incident to it. In reserve, in bringing about this co-ordination, lies the power of the government. The financial reorganization of railroads with unsound financial structures is facilitated by a revision of the Bankruptcy Act, and pending the re-establishment of private credit, the credit of the government is extended on reasonable terms, more particularly for purposes of rehabilitation and modernization.

The plan will not effect a great improvement in conditions quickly, but only gradually. It will prove most successful if there is an early and pronounced upturn in general business conditions, and least successful if there is no abatement of the depression. It may not forestall further railroad bankruptcies, and the restoration of private credit will proceed slowly. Apart from general business conditions, the chief threat to the plan lies in the difficulty which the numerous railroad managements may encounter in acting collectively of their own volition to any adequate extent, and in prolonged litigation if the power of the government is exerted to compel such action.

Abstract of Co-ordinator's Report

The report begins with a brief reference to the first report of the Co-ordinator of January 20, 1934, and what was there said in regard to the ills of the railroad industry. It shows that the financial condition of the railroads has not improved materially since then, and that their low earnings are due, not only to the general depression, but to the great increase in competition from other means of transport and to other changes in economic conditions.

The surveys of railroad operation, equipment, service, and rate policies made by the staff of the Co-ordinator show, the report says: That it is possible to reduce railroad costs materially by co-ordination of facilities or service; to make further reductions, and also improve service and add to traffic, by using motor vehicles to supplement, or substitute for, rail operation; to reduce costs and improve service still further by using new types of equipment now available or in process of development; and to increase railroad revenues materially by adequate charges for various incidental services, driven down by wasteful competition. It has also been shown, the report says, that the present railroad rate structure is not well suited to modern conditions.

The ultimate objective is described as a system of transportation for the nation which will supply the most efficient means of transport and furnish service as cheaply as is consistent with fair treatment of labor and with earnings which will support adequate credit and the ability to expand as need develops and to take advantage of all improvements in the art. This system of transportation must be in the hands of reliable and responsible operators whose charges for service will be known, dependable, and reasonable and free from unjust discrimination.

As to the question of what the federal government can do to accomplish this objective it is stated that three general methods appear possible: One follows conservative lines of thought, with main reliance on private capital and enterprise; the second is bolder and involves a use of governmental power to compel a very radical change in railroad conditions, but still preserves the principle of private ownership; the third departs from this principle and makes railroad transportation a direct function of the government.

The report undertakes to show what can be done under each of these general methods, to determine which is preferable, and to work out the details of the one chosen, which is Plan I for the reasons indicated.

Plan I—Regulation

Plan I is described as merely a development of present government control of privately-owned transportation agencies.

Regulation of Other Carriers. While the federal government regulates railroads thoroughly, it regulates other carriers little or not at all. In his second report, of March 10, 1934, the Co-ordinator recommended that water carriers and highway motor carriers be regulated, along with the railroads, by the Interstate Commerce Commission. This recommendation is repeated.

It is stated that unrestricted railroad competition does not protect but harms the public; that this is also true of the other carriers; that the transportation system must be dealt with as a unit, for all the agencies interlock and react in a multitude of ways; that proper regulation will benefit them all; that co-ordinated regulation by a single commission is necessary; and that self-regulation by code may be useful, but cannot alone meet the public need.

In the regulation of trucking and shipping special and difficult problems are met which are not found in railroad regulation. There are many private and contract operators. The chief reason for regulating these is to protect the common carriers against cut-throat com-

petition. The bills recommended undertake to confine their regulation to this purpose. In the case of water carriers, the proposed regulation is to extend to foreign as well as domestic shipping and also to wharfingers, i.e., the operators of the port terminals.

Private and Contract Carriers

Large shippers can and do operate their own ships or their own fleets of trucks to handle their own traffic, and in the case of trucks this opportunity extends even to smaller concerns or individuals. In both fields, also, there are operators who do not hold themselves out to be common carriers, but confine themselves to carriage on the basis of special contracts or agreements.

These private and contract carriers might be ignored if they did not have a tendency to demoralize or impair the system of common carriage which undertakes to serve all alike and is of prime importance to the country. For example, private carriers are assured of a large tonnage of which they can not be deprived, but they may also have some available space, particularly on return trips, which they can use for non-proprietary tonnage. In order to fill this space, which they regard as a by-product, they may make special rates below the level which common carriers find necessary, with the result that important parts of the business of the latter are unsettled, depressed, and demoralized.

The contract carrier may differ from the common carrier only in the fact that he undertakes to skim the cream of the traffic and leave the portion which lacks the butter fats to his common-carrier competitor. Obviously such operations can have very unfortunate and undesirable results.

There are, however, private and contract operations which are not open to these objections. An outstanding example is the operation of the cargo boats on the Great Lakes which carry, chiefly, iron ore, coal, and grain. So long as they confine themselves to such forms of traffic, they apparently are, as a practical matter, not competitive either with railroads or with common-carrier steamship lines. There are similar instances in the coastwise, intercoastal, and inland waterway trades.

Practicability of Regulation

As pointed out in the Co-ordinator's second report, one of the arguments most often advanced against federal regulation of motor trucks is based on alleged impracticability. This objection was discussed at length and answered. It is sufficient to say that the only way to determine this question finally and irrefutably is to put it to practical test. The results sought to be accomplished are certainly highly desirable; there are good reasons for believing that they can be accomplished; it is impossible to prove the contrary by *a priori* reasoning. That being so, the sound thing to do it to try. Those who urge the impossibility of accomplishment are, in fact, those who do not wish accomplishment.

The organization of the industry brought about and fostered by a code can be of great help to commission regulation. There is even no reason why the industry in its code should not undertake self-regulation of rates, so long as regulation of rates by the Commission is not precluded, where necessary. In the drafts of legislation herewith submitted, the opportunity for such use of codes is left open, but it is provided that they shall be administered in behalf of the President by the Co-ordinator of Transportation, hereinafter described, in harmony with the policy of centralizing governmental administration of all transportation matters.

With the Co-ordinator's second report were submitted drafts of two bills providing, respectively, for the regulation by the Interstate Commerce Commission of water carriers and motor carriers. These bills have been reviewed in the light of criticisms and suggestions which have since been offered, and certain changes have been made. In their modified forms, they are submitted again.

Owing to the creation of the Federal Aviation Commission, no recommendation is made with respect to the regulation of air carriers, but the plan for the reorganization of the Interstate Commerce Commission makes provision for such regulation, if it should be thought desirable to entrust it to the commission.

Reorganization of the Commission

If the Interstate Commerce Commission is to regulate the water and motor carriers, a reorganization will be necessary to enable it to function expeditiously and efficiently. The report recommends a Chairman, serving as such throughout his term of office and designated by the President, and four divisions: The Finance Division, three members; the Railroad Division, five members; the Water and Pipe Line Division, three members, and the Motor and Air Division, three members. Their duties are indicated, roughly, by their titles. Provision would be made for special divisions, where necessary. The chairman of the commission and the chairmen of the four divisions would constitute a Control Board, to which the chairman would initially refer questions of general transportation importance which in his judgment should be passed upon by the board for the guidance of divisions to avoid possible conflict or inconsistency of policies or decisions. The board could also review such questions in connection with petitions for rehearing or reconsideration of decisions by divisions. The decisions of the control board would be binding upon all divisions as precedents.

The members of each division would be designated initially by the chairman of the commission, but there would thereafter be some rotation in membership. The chairman of each division would be chosen each year by majority vote, or by the chairman of the commission in the absence of a majority selection. The statute would be so drawn that the commissioners now in office would continue until their terms expire, with the usual opportunity for reappointment.

Although the draft bill provides for the appointment of the chairman of the Interstate Commerce Commission by the President, Mr. Eastman said in the report that it is not a matter of vital importance and that "if Congress is impressed with this fear of executive domination, the shadowy basis for it can be removed by permitting the commission to elect the chairman."

The report states the advantages of such a reorganization as follows:

1. It would give the Commission, what it does not now have, a permanent executive officer relieved from many routine duties and with the specific duty of promoting the expeditious and efficient conduct of business and the improvement of procedure.
2. It would provide for specialization in the regulation of the different types of carriers; but at the same time co-ordinate regulation to avoid conflicting or inconsistent policies.
3. No matter would be determined by a body of more than five members, and the usual number would be three, thus avoiding the time-consuming deliberations of a larger body.

The reorganization would, paradoxically, the report says, make the commission both larger and smaller. The total number would be increased, but the maximum number acting on any one matter would be decreased from 11 to 5. The plan would, in effect, provide for a group of small commissions subject to a superior authority to preserve unity in transportation policy. The number of commissioners would not be at all disproportionate to the size and complexity of the field to be covered, namely, all important forms of transportation in the United States.

Co-ordinator of Transportation

One defect of past regulation is described as concentration on the cure of evils rather than on prevention

or planning. The report describes the planning which is necessary as follows:

It involves an intimate knowledge of the means of transport at hand and of the use which can be made of them. It would aim to promote the development of each means in line with its potential capacity to render service, to limit its uneconomic use where some other agency can better meet public needs, to check the provision of new facilities which will serve no sound economic purpose and may impair existing agencies, to encourage the cooperation of the various agencies in needed joint service, to discourage wasteful or destructive competition, and to stimulate experimentation and research into means of improving service. It would study the charges for the service, not from the standpoint of individual complaints, but broadly—for the purpose of uncovering general principles and of arriving, if possible, at means of simplifying the present confused and complicated rate structure. It would consider methods of management and organization, and the accounting and statistical needs for purposes of regulation and also of efficient management and the information of investors. It would give attention to the relation of both labor and capital to the industry, to the means of affording proper protection to labor but helping it to avoid unwise policies, and to the means of meeting capital needs but avoiding financial exploitation.

The results of this research would be made public in special reports from time to time, but would be summarized each year in an annual report on the state of transportation in the nation for the particular information of the President and Congress. The planning agency would be subject to call at any time, for help and advice, by the President and committees of Congress. It would also keep in close touch, as a liaison agency for the President, with the various departments having to do in one way or another with transportation, such as the Bureau of Public Roads and the Board of Engineers for Rivers and Harbors, with a view to helping them correlate their activities in the interest of the general transportation situation.

In the field of prevention, so far as it can be distinguished from planning, the principal opportunity would lie in the bringing of opposing groups or factions together for the purpose of reconciling or composing differences of opinion. Co-ordination is defined as "joint action on the part of individual carriers for the purpose of eliminating unnecessary expense or increasing revenues or improving service."

This work of planning, prevention and co-ordination cannot be left wholly to carrier organizations, Mr. Eastman believes: (1) Because of the inability of the various groups to work together; only the federal government can cover the whole field impartially and effectively; (2) because carrier organizations are only associations of carriers whose individual interests are often adverse; government activity is needed to spur them into effective collective action; and (3) such organizations cannot give the President and Congress the advice and assistance which they need.

Cabinet Officer Not Recommended

The possibility of carrying on this work through a Department of Transportation headed by a cabinet officer is discussed and rejected. The conclusion is reached that it should be entrusted to an independent, non-political agency, in effect by extending the plan of the emergency act and creating a permanent Co-ordinator of Transportation, designated by the President from the membership of the commission. He would function independently of the regulatory branch, except that it would have full power of review over his orders and there would be certain lesser links.

It can be argued with force that transportation is of such vital importance and has become so complex and chaotic that the Administration in power cannot escape responsibility for it; and that a cabinet member to shoulder this responsibility is both logical and necessary. The transfer to one head of the functions now scattered through several executive departments would have advantages, and the new Department of Transportation could also undertake the work of planning, prevention, and co-ordination, the need for which has been shown.

While these arguments are cogent, the opposing arguments have the greater weight. Transportation is essentially a technical subject and should be dealt with accordingly. It is vital that it be kept out of politics, so far as possible. A cabinet member, concerned with general affairs of state as well as with transportation, would have difficulty in mastering the subject. Necessarily, also, he is in politics and has no greater permanence than the Administration of which he is a part. There would thus be frequent shifts in the personnel of the Secretary of Transportation, militating against any continuity of policy and development of wisdom from experience. Moreover, the situation here differs from that found in countries, like Great Britain, having a parliamentary system. There, the executive and legislative branches of the government are normally in harmony. Here, the President and Congress are often in discord. In these circumstances, a non-political officer would have an advantage over a cabinet member in dealing with the two branches of the government. It is also the fact that there is a degree of permanence below the top in the personnel of the British executive departments, owing to well-established traditions in the civil service, which we do not enjoy in the United States.

The Interstate Commerce Commission has from the beginning been a bi-partisan but non-political body. Its legal status is that of an agency of Congress; the President appoints the members, subject to the approval of the Senate, and may in certain circumstances remove a commissioner from office; but otherwise he has, in the eyes of the law, no more control over the acts of the commission than over the deliberations of the Supreme Court. This independence of the commission from executive control has been zealously cherished by Congress and by both carriers and shippers, and with but few exceptions has been respected. If independent, non-political control over planning, prevention, and co-ordination is desired, as it should be, the commission is the logical body for this work.

The members of the commission, however, who are occupied with regulatory duties and the constant quasi-judicial determination of litigated issues—taking evidence, hearing arguments, conferring, and preparing reports—cannot themselves effectively carry on or administer the work of research, promotion, and negotiation involved in planning, prevention, and co-ordination. Nor is this work which should be left to subordinates. It differs essentially from regulation, but is of equal, if not greater, rank and importance. It follows that while, for many reasons, this work should be associated with the reorganized Interstate Commerce Commission as an institution, it should be segregated from the regulatory work and handled separately. The two would be branches of the same establishment with connecting links, but in general they would be conducted independently.

Duties of Co-ordinator

The duties of the Co-ordinator would be stated broadly in the statute, leaving much to his initiative and discretion, but would include the following:

1. To keep informed as to the management, operation, and development of all transportation agencies with especial reference to their proper co-ordination, the avoidance of waste, both now and for the future, and the promotion of a national system of transportation which will meet public needs.

2. To report each year on the state of transportation in the nation and recommend any legislation that the public welfare may demand, such report to be made to the commission and to be transmitted by the latter, with comments, as a part of its own annual report.

3. To consult and advise with the President and with all executive departments having to do with transportation, and to appear before committees of Congress on matters involving transportation.

4. To promote joint conferences between carriers and others having a direct interest in transportation, with a view to reconciling differences of opinion, composing controversies, discouraging destructive competition, and encouraging co-operation.

5. To bring to the attention of the carriers situations where they incur unnecessary expense or suffer loss of revenue because of undue competition or lack of proper co-ordination; and, in the event that they prove unable or unwilling to correct such situations, to enter appropriate orders, subject to review by the Commission.

6. To conduct such inquiries as the public welfare in transportation may demand.

7. To administer, in behalf of the President, any codes of fair competition for transportation agencies which the law may permit, as not in conflict with regulation by the commission.

There would be only four links between the Co-ordinator of Transportation and the regulatory branch of the commission. He would have authority to use, in addition to his own immediate staff, the bureaus of the Commission, but only with the consent of the chairman. He would make his annual report to the Commission, which would transmit it to Congress with comments as a part of its own annual report. His orders and regulations would be subject to review by the regulatory branch. He would be a member of the Control Board in the consideration of legislative matters.

The expenses of the Co-ordinator of Transportation would be borne, like those of the present Co-ordinator, by direct levy on the carriers, but all other classes of carriers, as well as the railroads, would be included. The levy would not be less than 25 cents nor more than 50 cents per one thousand dollars of gross revenue. Such a direct levy is desirable, not only because so much of his work would be for the direct benefit of the carriers, but also because it would make it easier to pay the necessary salaries. It would be essential for him to have the aid of transportation experts of marked ability. Often they would be employed on a temporary basis.

The salary of the Co-ordinator of Transportation would be the same as that of the other commissioners. He would be designated from the membership of the Commission by the President, but could be relieved from the duties of the office at any time, if in the judgment of the President the public interest should so require, and another member designated.

Carrier Organizations

The recent creation of the Association of American Railroads, with its avowed purpose, raises the question whether the Co-ordinator of Transportation should be given power to compel co-ordination projects by order. Even if given the power, he should not use it, if what is desired can be otherwise accomplished. Orders would result, ordinarily, in long delay—first, in review by the Commission and, second, in court litigation. The use of governmental power for such a purpose is new. Many legal questions, to which the decisions of the Supreme Court do not furnish a certain answer, would be encountered, and hostile carriers would put every one of these questions to the final test. The early history of the Commission would be repeated.

A central organization, like the new railroad Association, should be encouraged to the utmost, and given every opportunity to accomplish voluntary improvements. The studies made by the staff of the Co-ordinator show beyond question that if the railroads are to furnish the service and charge the rates necessary to attract a growing traffic, they must function to a far greater extent as a unit. The individual handling of many matters by a host of separate and often hostile carriers is the thing, above all others, which stands in the way of the best possible service at the lowest cost. If the carriers cannot overcome this handicap with government aid through the device of an adequate central organization, it must be overcome either by huge consolidations or by public ownership and operation.

The fact is, however, that there is serious doubt whether such co-ordination can be effectively accomplished voluntarily. In these circumstances, it is well that the proposed Co-ordinator of Transportation should have the power to order in reserve. Even if it involves delay and litigation, the exercise of this power in test cases may prove to be both necessary and wise. This conclusion is reinforced, also, by the fact that his authority is to extend over all forms of transportation, as well as the railroads.

What has been said in regard to the desirability of an effective central organization of the railroads applies also to the other groups of carriers. Neither regulation nor planning, prevention and co-ordination can achieve satisfactory results without the aid of such organizations of the carriers.

The Co-ordinator's power to issue orders is stated in the bill as follows:

(e) Wherever in his judgment necessary or desirable, require by appropriate order or orders co-ordination by carriers of or affecting the property, operations, practices, or services of such carriers or the pricing of such services; and any such order or orders shall make provision for just compensation for the use or taking of carrier property or for carrier services; *Provided, however,* That nothing in this paragraph shall be construed as limiting any original jurisdiction over any of said matters now or hereafter vested in the commission nor the review of such order or orders in the manner herein provided.

Protection of Railroad Employees

The report discusses the protection against reduction in employment which was given to railroad labor in Section 7(b) of the Emergency Act, and shows why it has had the effect, very largely, of preventing accomplishment of the purposes of the Act. The act expires on June 16, 1935, and Section 7(b) along with it. What similar provision, if any, should take its place?

The great need of the railroads for reducing their costs, so that they may adjust their service, equipment, and rates to present-day conditions, is shown. Only in this way can they regain and create traffic, thrive, and in the end add to employment, Mr. Eastman says. Some of the improvements which will reduce expense will at the same time improve service and add to traffic, while others will only cut costs. It is suggested that attention may well be concentrated on the former until the tide of traffic rises. Upon such a rising tide, the other economies might be brought about without much hardship to employees. However, conditions may not be favorable, and the necessary economies may involve some displacement of labor for the time being. The following conclusion is stated:

Employees who have given the best years of their life to an industry are entitled to reasonable protection, as far as practicable. When displaced because of a decline in the industry and its business, there is no way in which protection can be given, unless employment or similar reserves have been set up. Labor-saving improvements, however, may produce the means whereby protection may be given. It is not just, in such circumstances, to throw an employee on the street without relief, especially if, as is often the case, the years which he has spent in the industry have unsuited him to other employment.

A bill is proposed applying this principle of dismissal compensation to railroad co-ordination projects. The compensation begins where pensions leave off and is graded with age and length of service. It would provide all men aged 60 or over, who might be displaced, the same annuity to which they would be entitled under the pension system at age 65. From this it would grade down, giving displaced youngsters considerably less, and the lesser amounts would be paid in lump sums. The compensation would in effect be adjusted to the likelihood of obtaining other work. The railroads would not at once secure the full benefit of the economies, but would gain part at once and all in due course.

The report also contains a thorough discussion of other proposals for the protection of railroad labor, such as the shortened work-day and unemployment insurance. The conclusion is reached that it is impracticable to impose a six-hour work-day upon the railroads unless it is imposed also upon their competitors, and probably unless it is imposed upon industry generally; and also that a general shortening of the work day has no merit as a means for cushioning the shock of particular co-ordination projects. The Co-ordinator proposes to work out a plan of unemployment insurance, for application to transportation agencies, in harmony with the report of the President's Committee on Economic Security. This may require some changes in the proposed dismissal compensation law.

The Alternatives to Hours Reduction

Granted that a moderate reduction in hours would have certain advantages, if it were practicable, it becomes necessary to consider the question of practicability, and also the advantages and practicability of the alternatives. It is possible to reduce

hours per day without cost to the railroads, if the employees are willing to labor at the same rate per hour, mile, or piece. There is no reason to believe, however, that they would willingly accept such a sacrifice. The only way of avoiding sacrifice on their part would be to pay the same compensation for the shorter day as for the 8-hour day. After investigation, the Interstate Commerce Commission estimated that if such compensation were paid, the application of the principle of a 6-hour day would have cost the railroads something like $419,000,000 in the 12 months ended with September, 1932, and in a reasonably normal year would have cost them approximately $640,000,000. It would have provided employment for from 60,000 to 100,000 additional men in the former and for from 300,000 to 350,000 in the latter.

It has been shown in the first portion of this report that the railroads, if dealt with alone, are in no condition to stand such an increase in expense. Clearly it would be necessary, before they could stand it, to impose a similar burden upon their competitors, and it is almost as clear that it would be necessary to make it a common burden upon all industry, for transportation will not prosper if its prices mount above the general level. Moreover, even if 100,000 men or more could be added to the railroad industry in this way, immediately the incentive for labor-saving improvements would be increased, and the problem of the displacement of men by such means would be intensified. Finally, such a financial burden upon the railroads would tend to discourage provision for such matters as pensions, unemployment insurance, and dismissal compensation.

It has been shown that the great need of the railroads, if they are to thrive and grow and gain new traffic, is reduction in costs and the rehabilitation and modernization of their properties. "Make-work" provisions not only will not contribute to stabilization of employment conditions, but will actually aggravate the forces which make for instability. They will also militate against the economic rehabilitation of the industry, because they will involve a large and permanent increase in operating expense. On the other hand, alternatives in the way of retirement insurance and dismissal compensation can, as will later be shown, be adopted without a similar threat to the rehabilitation of the industry, and will yet afford a reasonable measure of protection to the workers during the transition period pending railroad reinvigoration and increase in traffic and employment. Unless the workers choose wisely in the present difficult circumstances by which both they and the railroads are confronted, they will almost certainly in the end do themselves more harm than good.

In discussing the effect of economies on labor Mr. Eastman said: "The thought which some have that the need for reducing expense could be avoided if railroad fixed charges were reduced materially is not correct. Fixed charges are less than one-third of the total of even the present subnormal operating expense. A reduction in such charges is not a real saving in cost of service, but merely permits investors to be deprived, in whole or in part, of a return without technical insolvency. The process of reduction, through receiverships or bankruptcies and reorganizations, is itself damaging to credit, and private credit cannot in the end be maintained without the earning of a fair return."

A large section of the report is devoted to the question of labor relations. It is stated that "although a definite scheme of unemployment insurance for the railroad and general transportation industry can probably be devised in the near future, this does not seem practicable at the moment." A nation-wide placement service for transportation workers also is said to be necessary, but "rather than launch a service 'stillborn' because of the small amount of actual placement work that could be accomplished," the report says that it would be better to defer its establishment until it has something constructive to do. It is assumed that federal legislation for industrial workers in general will permit the establishment of a national plan, either for railroad employees or for all employees engaged in interstate transportation. On the basis of this assumption, arrangements have been made to prepare a plan in the light, first, of the decision of the Supreme Court in the railroad retirement law case; second, of the extent to which federal legislation will go in enlarging the area of federal regulation in the transportation industry; and, third, of the unemployment insurance plan proposed by the administration for industry generally. The details will be worked out in cooperation with the President's Committee on Economic Security.

Railroad Financial Reorganizations

The debt situation of the railroads and the need for financial reorganizations are discussed at some length. While the railroad amendment of 1933 to the Bankruptcy Act has not been responsible for the failure of bankrupt railroads to reorganize, experience has shown that it needs revision. Such a revision is proposed. It provides that the commission, after considering all plans which are offered, shall tentatively approve a plan of reorganization which shall then be passed upon by the court after hearing all objectors. If approved by the court, the plan shall then be submitted to the security-holders. The consents of two-thirds of each class of creditors and stockholders shall bind minorities. However, the court may, after further hearing and if it finds the plan fair and equitable, make it effective without such consents. Authority is also given to the commission to regulate protective committees, organized to represent groups of security-holders. There are numerous other minor changes.

The statute has not had all the results which were desired. The odium has been no less on going into bankruptcy than on going into receivership, and while a considerable number of railroads have been placed in the hands of trustees under the statute, they have all remained there, with the exception of one line which was abandoned, and no financial reorganizations have been accomplished. At the same time the tendency to save railroad companies from receivership or bankruptcy through Reconstruction Finance Corporation loans has continued, notwithstanding that under the Emergency Act the commission is prohibited from approving such a loan, if it is of the opinion that the carrier "is in need of financial reorganization in the public interest."

In large part, the failure to effect financial reorganizations under Section 77 of the Bankruptcy Act has been due to the prevailing uncertainty as to the future prospects and earnings of the railroads. Interested parties have been unwilling to attempt the preparation of a plan without a clearer conception of the normal earnings upon which the future success of the plan must depend. To a considerable extent, however, the failure has been due to defects and deficiencies in Section 77 itself.

The revised statute, if enacted, will furnish a better opportunity and vehicle for railroad financial reorganizations. That, however, is by no means a complete answer to the basic problem. If we are to continue to depend upon private enterprise in the conduct of railroad transportation, profit for the private owners is a *sine qua non*. It is only in the reasonable anticipation of such profit that investors will risk their money in the business. If they are to buy bonds, they must have reasonable assurance that the comparatively low rate of return will be paid in times of depression as well as prosperity; and if they are to buy stock, they must be convinced that if, perchance, dividends are suspended in times of depression, the loss will later be made good by higher than normal dividends. There is no escape from this profit motive under private ownership, for it is the very essence of the system.

There are strong reasons to hope for much better railroad net earnings in the future. With revival of business, the net will probably improve at a faster rate than the gross. The drastic economies in recent years have been accomplished to a considerable extent at the expense of maintenance, and what has been deferred in this respect must be made good, but railroad managements have learned much through adversity and many of the economies will be permanent. The intensive studies which are now being made by the staff of the Co-ordinator and under the auspices of the Association of American Railroads will disclose many improvements which can be made in operation, equipment, service, and rates, and which will not only save expense but add materially to traffic.

The trouble is that this process of improvement will be

gradual. Before the mental state of prospective investors will become sufficiently optimistic for general railroad financing, they will need to be shown by positive results, to be convinced that these improvements will not be offset by similar improvements in other forms of transportation, and to be convinced, also, that the public authorities and public opinion will permit of a very high standard of earnings and protection to security holders. In the meantime, however—and this is the most serious dilemma—, credit will be needed, not only for debt maturities, but for such rehabilitation and modernization of the railroad properties as is requisite to the best financial results.

In the discussion of the general railroad financial situation, the following conclusions are drawn:

1. No good will be accomplished by piling up indebtedness through Reconstruction Finance Corporation loans, unless the carrier has a sufficiently sound financial structure so that some measure of private credit is likely to be regained rather quickly with an upturn in business. It is better that carriers not so situated should avail themselves of the Bankruptcy Act. Trusteeship under the Bankruptcy Act ought not to be regarded as a calamity. It is rather a temporary haven from which the railroads can later emerge in a better position to face the future.

2. For roads in bankruptcy, two courses will be open. They can rest with the trustees until future prospects can be forecast more accurately, or they can proceed to immediate reorganization. In the event that they choose the first course, needed capital funds can be obtained, to the extent that the trustees and the court are willing to issue trustee certificates with a sufficiently favorable lien.

3. The problem with respect to immediate reorganization is an individual one for each carrier. The necessary objectives are to provide an opportunity for the issue of high-grade bonds close to the rails during the transition period of rehabilitation and modernization, and yet pave the way to the ultimate sale of stock.

4. For the present, private credit is not a dependable quantity, and the government must be the chief source of needed capital funds. It should not provide funds for the preservation of unsound financial structures, but it can well be liberal in the provision of funds for well-conceived plans of rehabilitation and modernization.

Consolidations and Unifications

The report discusses progress in the unification of railroads under the Transportation Act, 1920, and points out these weaknesses in the present law:

1. Consummation is dependent wholly upon the voluntary action of the carriers.

2. Independent carriers have in general found it impossible to effect consolidations by mutual agreement. The prevailing method is for one carrier to acquire a controlling interest in the stock of another, or for some agency to acquire such interests in the stocks of both, prior to arranging for a consolidation or other unification. Such operations drive up the price of the stock which is being acquired, and usually involve a diversion of railroad cash which could better be used for other purposes.

3. Even if a consolidation be arranged and finally approved by the Commission, considerable amounts of cash will now usually be necessary to take care of dissenting minority interests. The inability of the railroads to obtain cash during the depression has halted progress in unification.

4. It is difficult, if not impossible, to devise a plan which conforms to the elaborate specifications of the Act, and any plan can only meet these specifications temporarily, owing to continual change in underlying industrial and financial conditions.

5. The rapid development of competition with other forms of transportation has made the emphasis in the Act upon the preservation of railroad competition unnecessary in the public interest.

Methods of overcoming these weaknesses are outlined in the report, but it is concluded that under present financial conditions it is unlikely that there will be immediate need for these changes in the statutory provisions, and for that reason, and in view of the extent and complexity of the other transportation legislation recommended, these changes are not now urged.

Transportation Subsidies

The Co-ordinator, at the outset of his work, undertook an investigation of the extent to which different forms of transportation are in effect subsidized, directly or indirectly, by government; whether this results in unfair or uneconomic competition; and, if so, whether this condition can and should be remedied. The amount of ground to be covered and the difficulty of assembling and analyzing the necessary data have exceeded all expectations, with the result that the report has been delayed, although it is nearing completion. Recommendations on this matter are, therefore, deferred.

Labor Conditions in Other Agencies.—A similarly elaborate report, with the collaboration of the Department of Labor, is nearing completion in regard to prevailing wages and working conditions among the transportation agencies other than the railroads, making comparisons with railroad wages and working conditions. Recommendations on this subject are also deferred.

Other Matters.—In the Co-ordinator's second report of March 10, 1934, various minor changes in the Interstate Commerce Act relative to the regulation of the railroads were recommended. These recommendations are repeated. Four bills amending the interstate commerce act are proposed:

(a) To enable the commission to prescribe minimum as well as maximum joint rail-water rates, and to establish through railroad routes regardless of the "short-hauling" of any carrier.

(b) To include ports and gateways in the protection of Section 3 against undue preference or prejudice.

(c) To restore Section 4 to substantially the form which it had prior to 1920.

(d) To limit further the right to reparation for damages due to violations of the act.

Plan II—Large-Scale Unifications

There are many, both in and out of the railroad industry, the report says, who believe it will be impossible without radical measures to improve conditions in the industry or restore private railroad credit. They have no confidence in the ability of the managements of a very large number of independent systems to deal collectively and effectively with matters of common concern. They see hope only in large-scale unifications.

The so-called "Prince Plan" for the consolidation of the railroads into seven systems, investigated by the Co-ordinator last year, was based upon this view. After the Co-ordinator reported upon it unfavorably last year, the thought of those who hold this view has apparently turned to a further elimination of competition by combining all the roads in certain regions. To promote interregional co-ordination, there might be some superorganization for the control of general policies. Apparently the thought is, also, that the objects desired could be accomplished gradually. The first step would be pooling and common direction of traffic, and the charges therefor, to be followed later by consolidation of companies.

Advantages and Disadvantages of Plan II—Such large-scale unifications would have to be compelled. Probably the government could compel them, but litigation would follow and the result is uncertain.

If they could be forced, they would automatically pave the way for important co-ordination projects, which could be accomplished more quickly than under Plan I. The credit situation would probably be improved, al-

though it is likely that consummation of the plan would take a long time.

Much competition would be eliminated, but it would remain at various favored points, thus promoting uneven development of the country, unless a super-organization of the carriers were permitted amounting to practical country-wide unification of the railroads, or the commission were given an authority to disregard competition in fixing rates which it has never hitherto been given.

Protection to the public, in the event of such large-scale combinations, through minority directors representing the government would be disappointing. There are also practical objections, described in the report as follows:

It is difficult to visualize a grant by Congress of a right to private interests to monopolize railroad transportation within a great region, to say nothing of extending such authority, in one way or another, over the entire country. It is probable that there would be less general opposition to public ownership and operation than to such a proposal.

Plan III—Government Ownership and Operation

Plan III is premised on much the same views with respect to the efficacy of Plan I as are held by those who believe in Plan II. Instead of stopping at some midway point, it would go at once to the end of the road and embark upon public ownership and operation.

The report includes an outline of a plan, differing somewhat from that suggested last year, by which the railroads would be taken over by the United States Railways, to be created with a nominal amount of stock, held by the government, which would issue debenture bonds guaranteed by the government, in payment for the properties, in amounts to be determined by a special commission with earning power rather than cost or value as the determining factor.

Advantages.—The report states the advantages of public ownership and operation as follows:

1. The acquisition by the government, with provision for an interim rental pending final settlement, would at once stabilize the railroad financial situation. These temporary rentals could be fixed at a level which would prevent financial collapse of further large railroad companies.

2. Government credit would at once be available for rehabilitation and improvements. Such expenditures would be of great benefit to the capital goods industries.

3. The opportunities for economies would at once be at a maximum.

4. The complex situation created by government regulation of privately-owned companies would be much simplified, and there would be far less division of responsibility than now exists.

5. While it would be essential to make the industry self-supporting, if possible, rates could otherwise be influenced by considerations of public policy to a much greater extent than at present.

6. Steps found necessary for the good of the industry by the public trustees in charge would meet with less public resistance than at present.

Disadvantages.—The Co-ordinator believes, for the reasons stated in his first report, that the ordinary and grosser dangers commonly believed to be attendant upon public ownership and operation could be avoided, but that there are certain special dangers under present abnormal conditions. These are:

1. The federal government now has a debt which exceeds the maximum of the World War period, and it cannot avoid many further and heavy expenditures. A direct or indirect indebtedness of several billion dollars created by the acquisition of the railroad properties might add to this burden, to the extent that such indebtedness was not self-sustaining. No one can be sure what the amount might be, what fixed interest obligations it might impose, or the extent to which earnings would cover those obligations. The courts are likely to resolve doubts, in connection with compensation, in favor of the owners of the properties.

2. The economies which government acquisition and operation would immediately make possible are largely of the labor-saving variety. At a time when millions of men are unemployed, Congress might well be disposed to control the discretion of the public trustees in this matter. Unification or other economy projects might be postponed, and employment increased to make up deferred maintenance. If so, the government would be left with a large deficit to make good. Aside from the immediate financial effect, the nationalized railroads would start off as a subsidized institution.

3. The railroad rate situation would be difficult to handle under present conditions. Many producers think the rates are too high and hinder the restoration of prosperity. Congress might well be disposed to control the discretion of the public trustees in this matter also, and require many rate reductions to be made. An undiscriminating attack on this problem would have unfortunate results.

4. With government credit fully available, great pressure would at once be exerted by the capital goods producers for modernization of railroad equipment and facilities. While such modernization is desirable, it can easily be done too precipitately, in advance of needed experimentation and development. Here again there might be a tendency to control the discretion of the public trustees in ill-advised ways.

5. Government operation of all the railroads would create a difficult problem of administration and organization. While not insoluble, it might take time to find the right answer. Pending the development of the best type of organization, the deficit from operation might mount rapidly, a serious matter under present conditions.

6. While the railroads would be publicly owned and operated, their competitors would continue under private ownership and management. This would create complications hard to foresee, but they might well be serious.

Conclusions

Plan III contains the greatest potentialities of good and at the same time the greatest possibilities of harm. Under present conditions particularly, it would be essential to its successful operation that the public trustees be given an absolutely free hand. Only an enlightened and sustained force of public opinion could accomplish this result, and the Co-ordinator has as yet seen no evidence of such public opinion. It would be dangerous to take so far-reaching a step until the country is prepared to welcome it and to lend it the support and protection essential to its success.

Plan II does not appear either desirable or feasible.

Plan I has neither the potentialities for good nor the possibilities of financial harm of Plan III. Its greatest fault is that its good results will be accomplished rather slowly. On the other hand, if well administered and given whole-hearted support, both by the government and by the carriers, it holds forth much promise. The key to its success would largely be in the hands of the railroad managements. It is clear that under present conditions, with the rapid development of competitive means of transport, railroad methods must be changed radically, and in the direction of co-operation, collective action, and co-ordination. Half measures and compromises will not do. If the railroad managements perceive this and are able to subordinate their individual interests to the general good of the industry, they can make a success of Plan I, and the government can give them much help. If this plan does not prove successful, either Plan II or Plan III will be inevitable, and the probabilities lie with the latter.

Under present conditions, the Co-ordinator recom-

mends Plan I, and that every effort be made by all concerned to make it work.

Comments of the I. C. C.

The Interstate Commerce Commission's letter of transmittal, dated January 23, includes the following comments

As the result of further study, the Co-ordinator has now modified in certain details the motor carrier and water carrier bills submitted in his second report; essentially, however, they are the same that were considered last year. He now recommends their adoption as modified. In this recommendation we concur, and we urge speedy adoption. The bills for the regulation of water and motor carriers we regard as vital. Upon their early enactment depends the preservation and development of a healthy, adequate, co-ordinated system of transport for the nation. We can have such a transport system only by unified regulation of these important, competing agencies; and the public needs and welfare must be the activating principle in such unified regulation, so that all forms of agencies for carriage may prosper within their appropriate fields, and the national transportation requirements may be met.

The Co-ordinator submits certain other bills and recommends their adoption. The bill to amend section 77 of the Uniform System of Bankruptcy Act, as amended, is not connected with or dependent upon the disposition to be made of the bills previously outlined. From our experience in the administration of the present law, which was intended to facilitate needed reorganizations of railroads, we believe that the proposals of the Co-ordinator measurably improve the procedure under the Bankruptcy Act, and we recommend enactment of the bill he proposes.

The bill proposed to provide for dismissal compensation deals with a subject which is not within the scope of any functions which Congress has hitherto imposed upon us. The importance and novelty of the subject are such as to demand wide and careful study and thorough familiarity with wages and working conditions such as we do not possess in our corporate capacity, and could have no present opportunity to obtain without undue delay in transmitting this report. We therefore make no comment upon the dismissal compensation bill.

The remaining bill is recommended by the Co-ordinator, but conditional upon the enactment of the water and motor carrier bills. It sets forth in much detail a plan for a reorganization of the Interstate Commerce Commission along novel and complex lines. We can not recommend its adoption.

1. To attempt to work out in detail a reorganization of the Commission is premature and undesirable until the intent of the Congress with respect to the imposition of added duties, if any, is made known with such reasonable clearness as to permit intelligent planning of the form of administration which will presumably meet the scope and demands of the new legislation. There is little profit in present discussion of reorganization of the Commission to meet duties which are yet wholly hypothetical. If new duties are to be delegated to the Commission, and their substantive features are sufficiently determined, we stand ready to aid in the formulation of any of the adjective or procedural features of the plan.

2. Any present increase in the number of commissioners is unnecessary from the standpoint of efficiency in work, and should be left for consideration until after the Commission may have had experience with any new duties which may be imposed.

3. It is not possible to prescribe by law with precision and in advance the form of administrative organization and detailed assignments of functions, duties, and methods of operation among rigidly fixed divisions of the Commission which will best enable us to perform the duties which may come upon us in the future. It is, rather, the part of sound policy to leave the details of the organization to the body which will be charged with continuing responsibility for results.

4. By but slight amendment of sections 16a and 17 of the Interstate Commerce Act, the Commission would be enabled to accomplish every one of the major changes in procedure and organization which the Co-ordinator proposes shall be fixed rigidly by statute, except as to an increase in the number of commissioners, to which we have already referred. This would permit experimentation with the general form of organization proposed by the Co-ordinator, and would possess the advantage of permitting prompt rectification of unforeseen errors in planning without waiting for an amendment to the law.

The existing law gives us wide powers as to delegation of functions to divisions of the Commission, and to individual commissioners or to boards of employees. Although such powers of delegation could well be widened if a considerable number of new duties should be imposed upon us, under the existing law we have been able promptly and repeatedly, and without increase in our own number, and generally with no increase in personnel, to undertake and administer new functions of an important character.

Further, we have had positive and unsatisfactory experience in operating under unnecessarily rigid statutory limitations upon the form of our organization. For many years the law required the valuation division of the Commission to consist of five members, although three sufficed for all other purposes. This hindered the prompt performance of the work, and contributed nothing to either accuracy or efficiency. Finally, at our request, Congress amended the law by striking out this requirement.

We will be prepared to submit forms of amendment to the Interstate Commerce Act which will give us all necessary power to divide our functions in such a broad way as the Co-ordinator suggests, if study and experience show such a division is necessary to meet any new duties.

5. But we do not agree that any such radical reorganization is now called for or is desirable. The plan seems to us to have positive disadvantages. The so-called Control Board, proposed to be set up from among members of the Commission, will in essence be the Commission. The remaining members, more than a majority of the whole number, while still to be called commissioners, will be little more than examiners, and privileged to vote in the disposition of but a limited class of cases. While theoretically they will be equals with the commissioners who are to sit as members of the Control Board, they will have no voice in any matters of administration; they can not advise with their colleagues, except through courtesy; and they will not join in the reports of the Commission to Congress. Such a form of organization must result in discord and in inefficiency and lack of concert of action.

6. The Commission needs no additional statutory authority to select one of its members to be a permanent or continuing chairman, but is not as a body convinced that such a course is desirable. From 1887 until 1910 the policy was to elect a chairman who continued to serve as such until the expiration of his office as commissioner. The results of experience of 23 years with this policy left no doubt in the minds of the then members of the Commission that the policy of annual rotation in the office, while possessing disadvantages, was better than that of a permanent chairmanship, which had developed more serious drawbacks. Nor do we regard the Co-ordinator's proposal for centralization of administrative powers in a single commissioner as a sound or desirable policy.

7. While we recognize the necessity for intensive research in the field of transportation and for better machinery for putting the resulting conclusions into operation, all with an eye to the national interest, we suggest for consideration whether the vesting of such a duty in a single official outside the industries affected will not result in a lessening of the individual and collective efforts of the carriers for their own self-help. It is at least arguable that research and planning should be left primarily to the transportation industries, and indeed that this should be under a mandate from Congress, possibly with governmental participation and supervision centered in a bureau of the Commission headed by a commissioner assigned for the purpose. The railroads of the country have entered upon this task by a reorganization and consolidation of their cooperative organizations. They should at least be permitted to attempt to demonstrate the efficiency of the organization which they have created. In other transportation industries the machinery already exists which can be put to work along more desired lines, and the Congress should require all of them so to organize themselves as to be in condition to carry out the purposes for which the Co-ordinator was created.

We have confined our comments to the principles involved in the Co-ordinator's proposals, and we do not deem it necessary now to comment upon details of the proposed bills. Whenever desired, we will comment on particular phases of the bills submitted, and the divergent views of the individual commissioners as to these bills, if any, can then be made manifest.

Commissioner Miller concurs in the foregoing, except that he favors the plan proposed by the Co-ordinator for the reorganization of the Commission.

The Committee on Public Relations of the Eastern Railroads has issued in its usual form the "Railroad Calendar" for 1935, showing graphically the distribution of gross operating revenues among the various items of railway expenses. The calendar shows that out of the gross revenues for 1933, it took the receipts of 158 days for wages; 19 days for locomotive fuel; 52 days for materials and supplies; 37 days for all other operating expenses; and 29 days for taxes. The receipts of the remaining 70 days were insufficient to pay 1933 fixed charges, since it required the equivalent of 18 additional days' revenues to cover these obligations.

Number of Defective Locomotives Continues to Increase

Twenty-third annual report of the Bureau of Locomotive Inspection shows 12 per cent of locomotives inspected found defective against 8 per cent in 1932

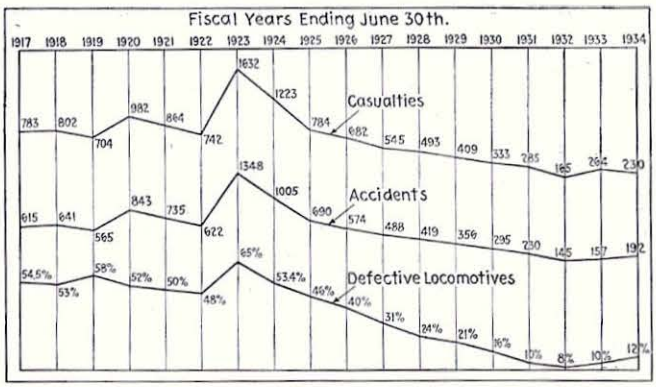
THE Bureau of Locomotive Inspection in its twenty-third annual report submitted by A. G. Pack, chief inspector of the Bureau, to the Interstate Commerce Commission, which covers the year ended June 30, 1934, shows an increasing percentage of defective steam locomotives found on inspection and a growing number of accidents. During the nine-year period from June 30, 1923, to June 30, 1932, the number of locomotives found defective and the number of accidents resulting from such defective conditions showed a steady and gratifying decline in numbers. The 1933 report, however, showed a change in the trend—the percentage of locomotives found defective, as compared with the 1932 report, increased from 8 to 10 per cent, while the number of accidents increased from 145 to 157.

During the fiscal year ended June 30, 1934, the number of locomotives inspected totaled 89,716, of which 10,713, or 12 per cent, were found defective and 754 were ordered out of service. In the previous year 87,658 locomotives were inspected, of which 8,388 were found defective and 544 were ordered out of service.

Accidents and Casualties Caused by Failure of Some Part of the Steam Locomotive, Including Boiler or Tender

	Year ended June 30				
	1930	1931	1932	1933	1934
Number of accidents	295	230	145	157	192
Per cent increase or decrease from previous year	17.1	22	36.9	8.3*	22.3*
Number of persons killed	13	16	9	8	7
Per cent increase or decrease from previous year	31.6	23*	43.7	11.1	12.5
Number of persons injured	320	269	156	256	223
Per cent increase or decrease from previous year	17.9	15.9	42	64.1*	12.9

* Increase.



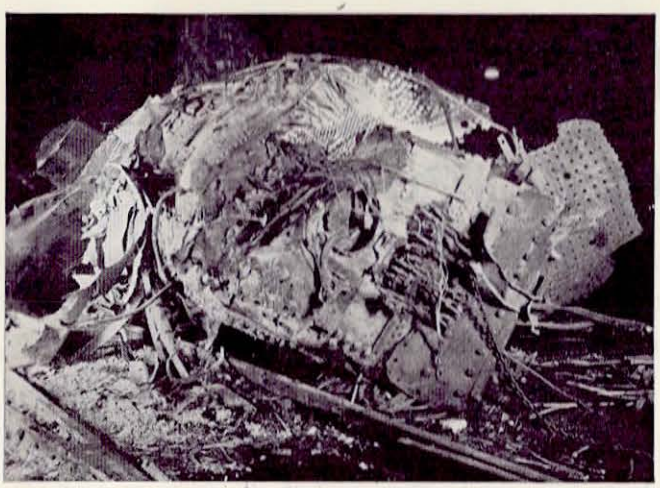
Relation of Defective Steam Locomotives to Accidents and Casualties Resulting from Locomotive Failures

In the year ended June 30, 1932, a total of 96,924 locomotives were inspected, of which only 7,724 were found defective and 527 were ordered out of service. The total number of defects shown in the last three reports was 27,832 in 1932, 32,733 in 1933, and 43,271 in 1934. The number of accidents was 145 in 1932, 157 in 1933, and 192 in 1934. The records for number of persons injured were 156 in 1932, 256 in 1933, and 223 in 1934. Fortunately, the number of persons killed has not increased, the record for the three years being nine, eight and seven.

The increase in the percentage of locomotives found defective was brought about by the railroads drastically curtailing their maintenance forces and, in general, performing only such work as appeared to be immediately necessary for the time being. The effect of this policy was to produce a considerably greater recession in the condition of locomotives over the two-year period, and especially for the year just passed, than is indicated by

Number of Casualties Classified According to Occupational Steam Locomotive Accidents

	Year Ended June 30									
	1930		1931		1932		1933		1934	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
Members of train crews:										
Engineers	4	100	5	73	3	59	2	58	1	57
Firemen	4	123	5	75	4	49	1	48	1	73
Brakemen	4	32	..	39	2	18	..	17	1	32
Conductors	..	10	..	21	..	7	..	10	1	17
Switchmen	..	10	..	8	..	3	..	8	..	6
Enginehouse and shop employees:										
Boilermakers	..	1	..	3	..	1	..	1	..	2
Machinists	..	3	1	4	..	1	..	2	..	5
Foremen	..	1	2	3	..	..	..	..	..	..
Inspectors	..	3	..	..	..	..	..	1	..	3
Watchmen	..	2	..	5	..	1	2	3	1	4
Boiler washers	..	2	..	..	..	..	..	1	..	..
Hostlers	..	3	..	4	..	5	..	..	1	5
Other enginehouse and shop employees	1	8	2	6	..	4	..	3	..	1
Other employees	..	6	..	6	..	2	..	2	1	4
Nonemployees	..	16	1	22	..	6	3	102	..	14
Total	13	320	16	269	9	156	8	256	7	223



Crownsheet Failures Resulting from Low Water, While Not Frequent, May Destroy the Locomotive and Kill Several Men

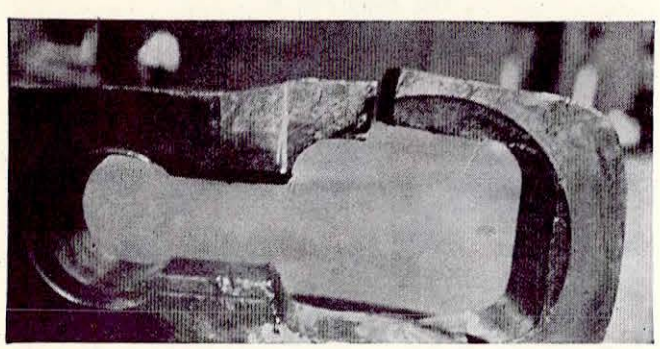
the increase in the percentage found defective because of the accumulated wear of major parts which would otherwise have been restored currently. As compared with the previous year, there was an increase of 38.6 per cent in the number of locomotives ordered withheld from service because of defects that rendered them immediately unsafe, an increase of 31.3 per cent in the total number of defects found, and increases in individual items found defective ranging from 3 per cent to 149 per cent.

Accompanying tables show a comparison of accidents and casualties during a five-year period and the occupation of those killed or injured.

Boiler Explosions

Boiler explosions or crown-sheet failures continue to be the most prolific source of fatal accidents. There was an increase of two accidents, an increase of two in the number of persons killed and of 15 in the number injured from this cause as compared with the previous year. Compared with the fiscal year ended June 30, 1912, the first year the Boiler Inspection Act was operative, there was, however, a reduction of 92.6 per cent in the number of accidents, a reduction of 94.8 per cent in the number of persons killed, and a reduction of 89.9 per cent in the number of persons injured.

Applications for extensions of time for removal of flues as provided for in Rule 10 totaled 1,674. Of these 140 were rejected, 165 were given extensions for a shorter time than requested, 189 granted extensions after defects found were repaired, 50 requests were cancelled, and 1,130 extensions were granted for periods requested.



Front End of Main Rod Failed Due to Application of Bronze by Fusion-Welding to Take Up Lateral Play

Odds and Ends . . .

The Immortal Bard

It may interest Shakespeare enthusiasts to know that Romeo and Juliette are adjacent stations on the Atlantic Coast Line.

Unreconstructed?

Far be it from this department to foment a new Civil War, but it is a queer fact that the "Northern Special" of the Louisville & Nashville is the only train in all the South using the words "northern" or "north."

Old Gabriel

Norfolk & Western shop employees at Roanoke, Va., are claiming a record length of service from "Old Gabriel," the steam whistle which has been announcing starting and quitting times with unfailing resonance ever since the shops were built in 1883.

World's Slowest Train

With all the excitement about fast runs, both passenger and freight, may we call attention to the opposite side of the picture —a train which by comparison makes the once well-known "Slow Train in Arkansas" a speedster of the first rank. The world's slowest train is believed to be the "tea and sugar special" which carries supplies from Port August, Australia, to Kalgoorlie and way points. Under its not too pressing schedule the train takes a week to travel the 1,051 miles and another week to make the return trip. More remarkable than the train's snail-like pace is the fact that it sometimes carries passengers!

You Never Can Tell

Since the days when the Indians were attacking trains in the West, there has been little or no use for expert riflemen in railroad work. It would have seemed, in fact, that the services of such a person would never be needed. Still, in railroading, nothing is sure except taxes, and, recently, a rifleman was required in railroad work. A smokestack on an enginehouse was scheduled to be taken down and replaced, but was found to be so corroded near the top as to involve a considerable hazard to the men employed in dismantling it. Nothing daunted, the intrepid foreman got out his trusty rifle, and from a safe distance and with unerring aim, drilled a ring of bullet holes around the stack near the top until the corroded portion came crashing down, with no one in the vicinity to be injured by its fall. After that, it was a simple and quite safe matter to dismantle the rest of the stack.

Faithful

Everyone pities a small child or an animal that is ill, because it cannot tell what ails it, and dog lovers will sympathize with the inarticulate grief of Boomer, a mongrel dog, who, after five years, still looks for the master that will never return. In 1929, William Sells, of Herington, Kan., the master of Boomer, went east for a surgical operation, and the dog accompanied him to the train on which he left. Sells died while he was away, but the dog never found it out, and he still expects to see the familiar figure, and hear the voice he was accustomed to obey. His master went away on a railway train, and that is the way Boomer expects him to return. So this unusual dog meets every passenger train that comes into Herington. He is now owned by T. P. Costello, Missouri Pacific agent, but he is not just a "station dog." He meets all the Chicago, Rock Island & Pacific passenger trains just as regularly as those on the other road. Boomer always takes his position on the platform and runs along with the engine, barking at the wheels. When the train has stopped, he hurries back to scan anxiously the faces of passengers alighting. He is always disappointed, but invariably he is on hand for the next passenger train.

NEWS

Snow Trains Going Over Big with New Yorkers

New Haven and West Shore excursions popular—Other roads planning similar trains

"Snow trains" were introduced to winter sportsmen and sportswomen of the New York metropolitan area on January 27 and immediately proved their worth as excursion traffic producers. The New York, New Haven & Hartford last Sunday operated one from New York to Norfolk, Conn., in the Berkshires, and attracted 500 passengers, the maximum number for which accommodations were available. The West Shore's January 27 winter sports excursion trains from New York to Bear Mountain carried 1,400 persons in addition to 650 who were carried there on the same day by regular West Shore trains. Both of these roads have scheduled other "snow trains" for coming Sundays in February and early March while the Delaware, Lackawanna & Western and the Erie will inaugurate similar excursions on February 3.

The New Haven's January 27 excursion, as stated in the foregoing, was limited to 500 and was sold out on Friday, January 25. The train scheduled for February 3, similarly limited in accommodations, was sold out on Tuesday, January 29. Facilities for all winter sports were available at Norfolk where the train remained parked and open to the excursionists throughout the day. The round-trip fare from New York was $2 and the train's equipment included two dining cars, where moderately-priced meals were served, and a baggage car rigged up by a New York sporting goods firm as a sports store. In this latter facilities were available for the sale, rental or repair of skis, skates and other sports equipment.

The West Shore's February 3 excursion tickets, at $1.25 for the round-trip between New York and Bear Mountain, will be valid also on all regular West Shore trains between those points on next Sunday. The special "snow train" will leave New York at 9:23 a.m. and, returning, will leave Bear Mountain at 5 p.m.

Next Sunday's Lackawanna "snow train" will be operated from New York to Pocono Summit, Pa., at $2.50 for the round-trip. Its equipment will include a buffet-recreation car where breakfast will be served at prices ranging from 25 to 75 cents and luncheon from 75 cents to $1. This buffet car, which is also used by the Lackawanna to accommodate groups of college students traveling over its line, is fitted with a radio and several booths, each seating four persons. In a baggage car of the train washing facilities, camp style, will be provided. The train will be parked at its destination point and open throughout the day. Also, the Pocono Manor Inn is extending its winter sports facilities to the party.

The Erie will operate its February 3 "snow train" from New York to Norsemen Hill, Salisbury Mills, N. Y., where the Norsemen Ski Club Tournament is being held. Prospective patrons are, however, advised to "Bring your skis and join in the fun" for which there will be ample time before the start of the tournament. Here, also, the train will be parked throughout the day near the sporting grounds and will include a buffet car where light lunches and refreshments will be served at moderate prices. The round-trip rate on the Erie's "snow train" will be $1.

Cover Design of New Haven Folder Advertising Its Snow Trains

That the "snow train" idea has taken hold in the New York metropolitan area is indicated in the publicity which the trains have received in the daily press, both in news and advertising columns. In the latter several stores have mentioned the "snow trains" in winter sports equipment advertising.

Wallace Named Director of Equipment Research

Engineer of wide experience chosen by A.A.R. at suggestion of its Research Advisory Board

Mention was made in the *Railway Age* of January 26, page 113, of the creation of the Research Advisory Board of the Association of American Railroads. At the suggestion of this board, Lawrence W. Wallace, vice-president of the W. S. Lee Engineering Corporation, Washington, D. C., was selected as director of equipment research. He will have charge of all research work relating to motive power and car equipment, both freight and passenger, and succeeds Harley A. Johnson of Chicago, who has been employed on a part time basis and who has resigned to devote his entire time to the Chicago traction interests, with which he has been associated for many years.

Mr. Wallace has had an unusual experience, which should fit him well for the new position. In addition to having had considerable experience in dealing with the problems of the railway mechanical department, his work as secretary of the American Engineering Council has given him an excellent training in the promotion and administration of large projects in engineering research; moreover, his contacts with legislators and public officials have made necessary a broad training in diplomatic approach in the handling of difficult problems.

Mr. Wallace was born at Webberville, Texas, August 5, 1881. He studied mechanical engineering at the Agricultural and Mechanical College of Texas, graduating in June, 1903. During his summer vacation in 1901 he was a machinist helper in the locomotive repair shops of the International-Great Northern Railway at Palestine, Texas. After leaving college he served as a special apprentice on the Gulf, Colorado & Santa Fe. In September, 1906, he became a member of the faculty in the mechanical engineering department at Purdue University, serving specifically as assistant in railway mechanical engineering. He remained at Purdue until June, 1917, and was for several years professor of railway and industrial management, and in charge of all railway mechanical work. He was in intimate contact with research at Purdue relating to the mechanical equipment of the railroads, and throughout his association with that university was in direct charge of the courses in car and locomotive design.

During his eleven years at Purdue, all of his summer vacations, except two, were

spent in railroad work. This included work in car and locomotive design on the Missouri-Kansas-Texas; locomotive road tests and other work in the test department of the A. T. & S. F.; association with Professor L. E. Endsley in tests for the American Steel Foundries on experimental track and relating to the frictional resistance due to sharp wheel flanges, and also comparative tests of rigid and flexible freight car trucks; preparation of instruction booklets for the Railway Educational Bureau; locomotive road and refrigerator car tests in association with Prof. G. A. Young; road and laboratory tests in co-operation with the Monon, with respect to behavior of locomotive cinders; and a series of

L. W. Wallace

standing tests at Purdue of large New York Central Lines freight locomotives.

While at Purdue he started research on the behavior of locomotive cinders. He has appeared as an expert witness during the last twenty years in 45 or more fire cases, in all of which the verdict has been favorable to the railroad companies. He is the author of a book on "Fire Losses—Locomotive Sparks," which was published in 1921.

From June, 1917, to March, 1919, Mr. Wallace was assistant general manager of the Diamond Chain & Manufacturing Company, Indianapolis, Ind. He left that company to become director of the Red Cross Institute for the Blind, at Baltimore, Md. This was organized for the purpose of training those blinded in military forces during the war. Mr. Wallace organized the institution and mobilized a staff equipped to teach handicrafts and vocational and pre-professional courses.

In January, 1921, Mr. Wallace became secretary of the American Engineering Council, then known as the Federated American Engineering Societies. He remained in this capacity until 1934, when he became vice-president of the W. S. Lee Engineering Corporation, in charge of its Washington office.

The American Engineering Council was organized to represent the engineers of this country in public affairs, its headquarters being at Washington. It necessarily came in contact with all branches of the federal government and the Congress, with respect to matters concerning engineering, industry and related subjects. A number of studies of a technical nature were also made, some of which have had a profound effect upon American industry. Among these were studies on Waste in Industry; Civil Aviation; Safety and Production; Industrial Coal—Purchase, Delivery and Storage; Street Traffic Signs, Signals and Markings; and the Twelve-Hour Shift in American Industry. As executive secretary of the Council, Mr. Wallace organized and directed these studies. He has served on many governmental, industrial and professional committees and boards, including confidential advisory groups relating to the functions, organizations and activities of the federal government.

Mr. Wallace was given the full degree in mechanical engineering by Purdue in 1912, and in 1932 that university conferred upon him an honorary degree of Doctor of Engineering. He is an honorary member of the Masaryk Academy of Work in Czechoslovakia, and in 1924 that government conferred upon him the Order of the White Lion. He is a member and active worker in a number of technical and engineering societies and served four consecutive terms as president of the Society of Industrial Engineers.

Airplane Makes Chicago-New York Trip in Three Hours

Aided by a wind estimated at 60 m.p.h., a transport plane of the Transcontinental & Western Air Lines arrived at Newark, N. J., airport on Thursday evening, January 17, at 9:24, in 2 hr. 54 min. from Chicago; estimated distance 744 mi. The plan carried 14 passengers, a pilot and a co-pilot, and was flown at a height of about 10,000 ft. It had in the previous week made a record over this route of 3 hr. 15 min.

Arch-Bar Truck Retirement Date Extended

Requests for extension of the effective date of the interchange rule prohibiting the interchange of cars equipped with arch-bar trucks after January 1, 1936, were considered at a recent meeting of the General Committee of the Association of American Railroads, Mechanical Division. The committee called attention to the impossibility of completing this program by January 1, 1936, and recommended that an extension of two years be granted to January 1, 1938. This recommendation has been approved by the board of directors of the association, and the necessary modification of Rule 3 will be shown in the next Supplement to the Interchange Rules.

John Barton Payne Dies

John Barton Payne, president of the American Red Cross, died at a hospital in Washington, D. C., on January 24. He was formerly counsel for many railroads, in 1918 was general counsel of the United States Railroad Administration, and for several months in 1920 and 1921 was director general of railroads in charge of the liquidation of its affairs while serving also as Secretary of the Interior.

Club Meetings

The New England Railroad Club will hold its next meeting at the Copley-Plaza hotel, Boston, on Tuesday evening, February 12. R. L. Lockwood, director of the Section of Purchases, Federal Co-ordinator of Transportation, will present a paper on railway purchases and standards.

The Central Railway Club of Buffalo (N. Y.) will hold its next meeting on Thursday evening, February 14, at the Statler hotel, Buffalo. H. S. Clarke, engineer M. W., of the Delaware & Hudson, will present a paper on continuous rail in ballasted track.

N. Y. Civic and Business Groups Join in Opposing St. Lawrence Project

The Chamber of Commerce of the State of New York has completed the formation of a committee which will represent leading organizations of the state in opposing the ratification of the St. Lawrence treaty, government construction of a power plant at International Rapids and the pledging of state credit to the New York Power Authority. Appointment of the committee was authorized at a conference of representatives of 26 leading civic and commercial organizations called by the state chamber last month. The committee planned to hold its first meeting at an early date to discuss its campaign against the

Steam Railway Accident Statistics October, 1934

The Interstate Commerce Commission's completed statistics of steam railway accidents for the month of October, now in preparation for the printer, will show:

Item	Month of October		Ten months ended with October	
	1934	1933	1934	1933
Number of train accidents:				
Total	463	502	5,033	4,572
(At highway grade crossings, included in total)	17	13	129	110
Number of casualties in train, train-service and non-train accidents:				
Trespassers:				
Killed	226	236	2,337	2,443
Injured	235	297	2,795	3,561
Passengers on trains:				
Killed	9	2	26	35
Injured	183	270	1,523	1,467
Employees on duty:				
Killed	34	38	434	403
Injured	1,448	1,360	14,172	12,852
All other non-trespassers:*				
Killed	147	161	1,306	1,305
Injured	587	621	5,231	4,591
Total—All classes of persons:				
Killed	416	437	4,103	4,186
Injured	2,453	2,548	23,721	22,471

* Casualties to "other non-trespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and non-trespassers,* were as follows:

Killed	142	144	1,209	1,176
Injured	390	381	3,337	2,758

Signal Section Meeting, March 11

H. G. Morgan, chairman, has announced that the Signal Section, Association of American Railroads, will hold its forty-first annual meeting at the Stevens Hotel, Chicago, on Monday and Tuesday, March 11 and 12.

Six-Hour Day Bill Introduced in Senate

The six-hour day bill proposed by the railroad labor executives was introduced in the Senate on January 30 by Senator Black. It had been introduced in the House by Representative Crosser.

Mediation and Retirement Boards Confirmed by Senate

The Senate on January 28 confirmed the President's appointments of John Carmody, J. W. Carmalt, and W. M. Leiserson as members of the National Mediation Board and of Murray Latimer, Lee M. Eddy, and John T. Williamson as members of the Railroad Retirement Board.

Eastern Car Foremen's Association Annual Dinner

The Eastern Car Foremen's Association will hold its annual dinner and entertainment on Wednesday evening, February 27, at Hans Jaeger's restaurant, Lexington avenue at Eighty-fifth street, New York City. Applications for tickets should be made to Thomas P. O'Brian, chairman 50 Church street, New York.

Senate Investigation of Railroad Management Reported Proposed

Senator Burton K. Wheeler, chairman of the Senate committee on interstate commerce, is reported to be planning the introduction in the Senate of a resolution calling for a sweeping investigation of railroad management by his committee. Such an investigation, if the resolution should be adopted, would undoubtedly tend to delay consideration of the legislation included in the comprehensive transportation plan proposed by the President and Co-Ordinator Eastman.

New "Flying Yankee" to Be Delivered on February 9

The new "Flying Yankee" of the Boston & Maine and the Maine Central—first streamlined train to be delivered to an eastern railroad—will move into New England on February 9. The train, which will have a Winton engine power plant, was built by the Edward G. Budd Manufacturing Company of Philadelphia, Pa.

On Saturday, February 9, it will move onto the Boston & Maine lines at the western gateway of the road in Mechanicville, N. Y., and make the run to Boston with an official party, and representatives of the press on board.

Another Distribution by R.R. Credit Corporation

The Railroad Credit Corporation has announced that it will make a liquidating distribution on January 31 of $726,166, or one per cent, to participating carriers. Of this amount, $344,834 will be in cash and $381,332 will be in credits. This will be the fourteenth liquidating distribution that has been made to participating carriers since liquidation began on June 1, 1933, and will bring the total amount distributed to $21,353,344, of which $9,442,565 is cash and $11,910,779, credits. The authorized distributions aggregate 29 per cent of the $75,422,410 fund after deduction of the $1,790,190 direct refunds in reimbursement of taxes paid on the revenues turned over to the pool.

Southern Expedites Aiken-Augusta Special

The Southern on January 5 shortened the northbound and southbound schedules of its Aiken-Augusta Special, year-round train operating between New York and resorts around Aiken, S. C., and Augusta, Ga. Under the new schedule the northbound run has been shortened by 2 hrs. 10 min., and an early morning arrival in New York is provided for the accommodation of those desiring to reach that city in time for a complete business day. The southbound running time has been reduced by 40 min.

Florida travel via the Southern has been "very good" this year, the road's passenger traffic officers report. It is thus anticipated that the current Florida season will bring a substantial improvement in business over previous years.

Traffic Club Annual Dinners

The annual dinner of the Traffic and Transportation Association of Pittsburgh will be held at the William Penn Hotel, Pittsburgh, Pa., on Thursday evening, February 7. Dr. Alfred H. Sweet, professor of history at Washington & Jefferson College, Washington, Pa., will be the principal speaker and entertainment will be furnished by the Baltimore & Ohio Glee Club. E. A. Jack, general traffic manager of the Aluminum Company of America, will act as toastmaster.

The Traffic Club of Newark, N. J., held its annual dinner on January 31 at the Newark Athletic Club. At this club's next regular meeting, to be held on February 4, Thomas A. Bradley, president of Acme Fast Freight, will present an illustrated paper on "Co-ordinated Rail and Highway Transportation."

Chicago Freight Collection Association Formed

In an effort to promote efficiency and economy and at the same time facilitate the payment of freight bills, 31 railroads in Chicago have organized the Chicago Railroad Freight Collection, 332 South LaSalle street, which began operations on February 1, under the direction of H. J. Buelterman, manager. Under the plan creating the association, it acts as a credit bureau, and patrons within the Chicago switching district who are on the association's credit accommodation list and who receive freight bills from several railroads may settle all these accounts by one payment made to the association. Besides being a convenience to shippers and consignees, the plan is of benefit to the railroads in that it speeds collections and lightens the work previously required in billing and collecting and fixing credit.

The association will not collect charges from patrons not on its credit list. Charges due from such patrons, which are payable prior to the delivery of inbound collect or the forwarding of outbound prepaid shipments, must be paid directly to the railroad agents as heretofore. Neither will the association adjust claims or adjust differences with shippers regarding the amounts of charges.

Handling and Distribution of Material, Stores Department to Handle Material

Co-ordinator Eastman announced on January 23 that the Association of American Railroads has approved and put into effect the following recommendation made by the federal co-ordinator:

"Delivery of material to point of use.

"It is recommended that the delivery of material and supplies to the point of use be organized and operated by the stores department unless it can be clearly demonstrated that at some particular point conditions are so unusual as to make such procedure uneconomical."

This recommendation, Mr. Eastman said, was developed by the Section of Purchases of the co-ordinator's staff, in co-operation with the Purchases and Stores Division of the association. The subject had been studied for a number of years by a committee of the Purchases and Stores Division, and the information secured through this study indicated clearly that substantial saving would accrue to the railroads if material and supplies were kept under control of the stores department to the point of delivery to the using departments.

"Delivery by the stores department avoids divided control of equipment for handling materials, and prevents the waste due to using high-priced shop labor for handling operations and the consequent loss of time on shop operations. It enables stores officers to keep in closer touch with actual requirements, to reduce or eliminate unnecessary shop and line stocks, to maintain more effective control of stores stocks, and to locate and return to stores any materials requisitioned but not applied.

"Certain railroads which have already adopted this policy have shown savings of more than 60 per cent in the cost of delivering material to the using departments. A single large road reported savings of approximately $145,000. Other roads reported savings of more than $40,000 per year. Total annual savings reported by 13 roads were approximately $490,000."

Interdependence of Transportation and Steel Industries

I. Lamont Hughes, president of the Carnegie Steel Company, spoke on the relationship between the transportation and steel industries at the twenty-seventh annual dinner of the Traffic Club of Philadelphia, held at the Bellevue Stratford Hotel, January 22.

"In dwelling upon the dependence of transportation and the steel industry upon each other," said Mr. Hughes, "I have at-

tempted to pay tribute to the various transportation facilities for their contributions to the steel industry in the form of their steel tonnage requirements. In a reciprocal fashion, mention has been made of the contributions of the steel industry to the transportation facilities in the form of the vast movement of materials required by the steel industry in the manufacture of steel and its many products. I have also cited some examples which were intended only to illustrate the contributions of the steel industry in general to the economic welfare and advantage of the transportation facilities in the form of the continuous research and technical effort put forth by the steel companies to develop, for the various means of transportation, grades of steel specially suited for their many purposes, at a price low enough to justify their use in view of the savings and other advantages thereby effected.

"It is being well said that one of the surest methods of return to prosperity is by a return to normal operations of the durable goods industries, of which steel is one of the most important. I think we can well include return to normal operations of transportation, also, as an important factor in return to prosperty. I believe we cannot have prosperity again until these two great industries are operating at a more satisfactory rate; and, as prosperity comes to them, so will it come to many others, individually and collectively, since they jointly are the largest consumers of labor and commodities in the country.

"Transportaiton, in the broadest sense, is not a business within itself. It is dependent on the industries it serves, and they on it. To be prosperous, they must act in harmony. Their problems are sometimes perplexing, but can be solved to the benefit of both parties. They may be likened to partners in the same business; their prosperity is mutual."

Colonel B. W. Dunn Retires

Colonel B. W. Dunn, manager of the Bureau of Explosives, Association of American Railroads, (whose title is chief inspector), has been retired at his own request, and has been succeeded by Walter S. Topping, assistant chief inspector, the change taking place on February 1. Colonel Dunn may be called the father of this establishment, he having taken up the enterprise in 1907, while he was still an officer in the United States Army. The Bureau, beginning as a small company of inspectors of explosives in transportation, has been developed into an extensive organization, not only representing the railroads in their relations with shippers of explosives and other dangerous articles, but also acting as an auxiliary to the United States Government, in its function of formulating regulations, under authority of Congress, for the safe transportation of explosives throughout the country, not only by railroads but as well by water. The duties of the chief inspector have thus been both scientific and diplomatic, and Colonel Dunn has been an ideal specialist in both of these functions.

Beverly W. Dunn was born in Louisiana, in October, 1860, and was graduated from West Point, as an honor man, in 1883. He served in the Artillery branch until 1890 and was then transferred to the Ordnance department. In June, 1907, he was "loaned" by the President of the United States to the railroads, as represented in the American Railway Association, for the purpose of organizing the Bureau for the Safe Transportation of Explosives and Other Dangerous Articles. Subsequently, on his own application, he was retired by President Taft.

During the time Colonel Dunn was in the Ordnance department, he had charge of various operations, and it is to him that the United States Government owes some of the important adjuncts for national defense, adopted and used by both the Army and Navy; particularly the explosive that is used to fill projectiles in both the Army and Navy service and known officially as "Explosive D," and unofficially as "Dunnite." Of more importance still and of possibly greater value, is the detonating fuze used with this explosive and essential to its efficiency.

Colonel Dunn's early training was wholly in the army, but his marked success in the establishment of the Bureau testifies to his adaptability and quickness of perception; a strong man in any field.

Walter S. Topping, who also has been with the Bureau since 1907, and who now becomes chief inspector, saw his first railroad service with the Long Island. He was graduated from Columbia in 1892 and in early life was a lawyer. He was for a time in the Claim department of the United States Express Company, leaving that service for the Bureau of Explosives. In this field he has been an indispensable lieutenant to the chief inspector. He has also been a leading member of the Railway Fire Protection Association.

Meetings & Conventions

The following list gives names of secretaries, date of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—T. L. Burton, Room 3400, Empire State Building, New York, N. Y. Annual meeting, May 2-4, 1935, Hotel Sherman, Chicago, Ill. (Tentative).

ALLIED RAILWAY SUPPLY ASSOCIATION.—F. W. Venton, Crane Company, 836 S. Michigan Ave., Chicago, Ill. To meet with Air Brake Association, Car Department Officers' Association, International Railroad Master Blacksmiths' Association, International Railway Fuel Association, International Railway General Foremen's Association, Master Boiler Makers' Association and the Traveling Engineers' Association.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, F. T. R., M. & O. R. R., Chicago, Ill.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 816 McCormick Building, Chicago, Ill. Annual meeting, September, 1935, Toronto, Ontario, Canada.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Union Station, St. Louis, Mo. Annual meeting, June 18-20, 1935, Hotel Sherman, Chicago, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago, Ill. Annual meeting, October 15-17, 1935, Hotel Stevens, Chicago, Ill. Exhibit by Bridge and Building Supply Men's Association.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—E. H. Gurton, Mgr., Land Settlement and Development, C. N. R., St. Paul, Minn.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in co-operation with the Association of American Railroads, Division IV.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 12-14, 1935, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITOR'S ASSOCIATION.—John Ferrick, Missouri Pacific Lines Magazine, 2108 Missouri Pacific Lines Building, St. Louis, Mo.

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C., M., St. P. & P. R. R., 11402 Calumet Ave., Chicago, Ill. Annual meeting, May 6-8, 1935, Hotel Sherman, Chicago, Ill. (Tentative).

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—R. E. Schindler, Union Trust Bldg., Washington, D. C.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—29 W. 39th St., New York, N. Y. Railroad Division.—Marion B. Richardson, Ahrens & Richardson, 30 Church St., New York, N. Y.

AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington, D. C.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Building, Washington, D. C.

- Division I.—Operating.—J. C. Caviston, 30 Vesey St., New York, N. Y.
  - Freight Station Section.—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill. Annual meeting, June 18-20, 1935, Chicago, Ill.
  - Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
  - Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
  - Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
  - Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y. Annual meeting, June 25-27, 1935, Hotel Stevens, Chicago, Ill.
- Division II.—Transportation.—G. W. Covert, 59 E. Van Buren St., Chicago, Ill.
- Division III.—Traffic.—J. Gottschalk, 143 Liberty St., New York, N. Y.
- Division IV.—Engineering.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 12-14, 1935, Palmer House, Chicago, Ill.
  - Construction and Maintenance Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 12-14, 1935, Palmer House, Chicago, Ill.
  - Electrical Section.—E. H. Fritch, 59 E. Van Buren St., Chicago, Ill.
  - Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y. Annual meeting, March 11-12, 1935, Hotel Stevens, Chicago, Ill.
- Division V.—Mechanical.—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill. Next meeting, June, 1935, Chicago, Ill.
- Division VI.—Purchases and Stores.—W. J. Farrell, 30 Vesey St., New York, N. Y.
- Division VII.—Freight Claims.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill.
- Division VIII.—Motor Transport.—George M. Campbell, 30 Vesey St., New York, N. Y.
- Car-Service Division.—C. A. Buch, Transportation Building, Washington, D. C.
- Accounting Department.—E. H. Bunnell, Vice-President, Transportation Building, Washington, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Chief Clerk and Claim Agent, General Claims Department, Alton R. R., 340 W. Harrison St., Chicago, Ill. Annual meeting, May 15-17, 1935, Hotel Biltmore, New York, N. Y.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., 1519 Daily News Building, 400 W. Madison St., Chicago, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—L. F. Flanagan, Detroit Graphite Company, Room 1158, 20 N. Wacker Drive, Chicago, Ill. Meets with American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 2276 Wilson Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—A. S. Sternberg, M. C. B. Belt Ry. of Chicago, 7926 S. Morgan St., Chicago, Ill. Annual meeting, May 2-4, 1935, Hotel Sherman, Chicago, Ill. (Tentative).

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 2514 W. 55th St., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, Room 299, 610 S. Main St., Los Angeles, Cal. Club not active at present.

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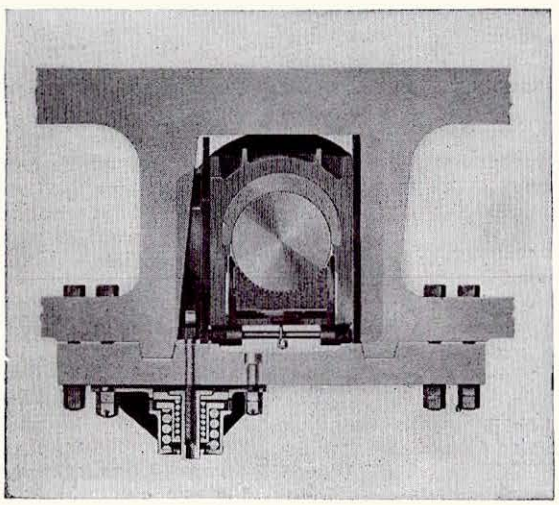
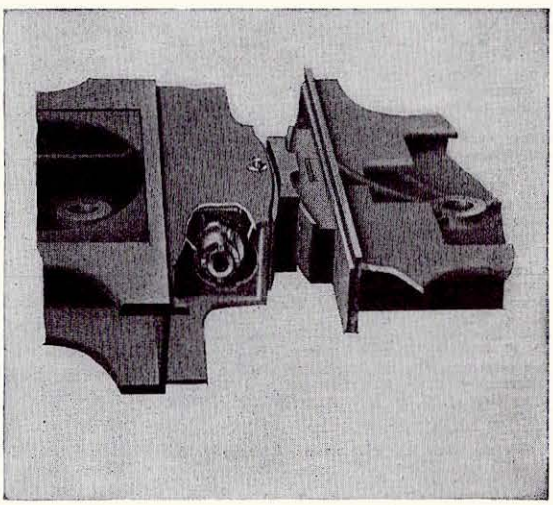
The New Franklin TWINS

provide

AN EASY RIDING LOCOMOTIVE AND A LOW MAINTENANCE LOCOMOTIVE



Franklin Automatic Compensator and Snubber



Franklin Radial Buffer—Type E-2

Hand adjusted Driving Box Wedges that either stick or allow slack; ordinary engine-tender buffers that bind, are two major causes of excessive locomotive maintenance.

The new Franklin Automatic Compensator and Snubber automatically maintains adjustment of driving box fit regardless of wear or temperature change.

The new Type E-2 Franklin Radial Buffer automatically provides free universal movement yet maintains at all times normal contact between engine and tender.

By automatically maintaining proper adjustment at all times, these twins avoid excessive wear on the entire running gear and motion work of the locomotive.

They materially improve the riding qualities of the engine and save many times their cost in maintenance expense.

Franklin repair parts use jigs and fixtures that insure interchangeability, long life and dependability of service. Genuine Franklin parts are a guarantee of maximum trouble-free service.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.—J. F. Brady, Main and Barton St., St. Louis, Mo.

CENTRAL RAILWAY CLUB OF BUFFALO.—M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

CINCINNATI RAILWAY CLUB.—D. R. Boyd, 2920 Utopia Place, Hyde Park, Cincinnati, Ohio. Operation suspended indefinitely.

CLEVELAND RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings temporarily suspended.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Annual meeting, May 6-8, 1935, Hotel Sherman, Chicago, Ill. (Tentative).

INTERNATIONAL RAILWAY FUEL ASSOCIATION.—T. D. Smith, 1660 Old Colony Building, Chicago, Ill. Annual meeting, May 6-8, 1935, Hotel Sherman, Chicago, Ill. (Tentative).

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabasha St., Winona, Minn. Annual meeting, May 2-4, 1935 Hotel Sherman, Chicago, Ill. (Tentative).

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y. Annual meeting, May 6-8, 1935, Hotel Sherman, Chicago, Ill. (Tentative).

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Clyde S. Bailey, Washington, D. C. Annual meeting, October 15-18, 1935, Nashville, Tenn.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, Suite 322, 910 S. Michigan Ave., Chicago, Ill. Exhibit at A. R. E. A. Convention, March 11-14, 1935, The Coliseum, Chicago, Ill.

NATIONAL SAFETY COUNCIL.—Steam Railroad Section (see Safety Section, Association of American Railroads).

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Friday of each month, except June, July and August, 29 W. 39th St., New York, N. Y.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings, second Thursday of each month, alternately at San Francisco and Oakland, excepting July at Los Angeles and October at Sacramento.

RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—(Merged with Association of American Railroads.)

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton (Treas. and Asst. Sec.), First National Bank Building, Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1941 Oliver Building, Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton St., Chicago, Ill. Meets with Association of Railway Electrical Engineers.

RAILWAY FIRE PROTECTION ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1941 Oliver Building, Pittsburgh, Pa. Meets with Mechanical Division, Purchases and Stores Division and Motor Transport Division, Association of American Railroads.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. A. R., Division I.

RAILWAY TIE ASSOCIATION.—A. S. Fathman, Railway Exchange Building, St. Louis, Mo. Annual meeting, May 15-17, 1935, St. Louis, Mo.

RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, 1428 Broad Street Station Building, Philadelphia, Pa.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual meeting, September 17-19, 1935, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. A. R. Signal Section.

SOCIETY OF OFFICERS, UNITED ASSOCIATIONS OF RAILROAD VETERANS.—M. W. Jones, Baltimore & Ohio, Mt. Royal Station, Baltimore, Md. Annual meeting, October 5-6, 1935, Cincinnati, Ohio.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—R. G. Parks, A., B. & C. R. R., Atlanta, Ga.

TOOL FOREMEN SUPPLIERS' ASSOCIATION.—E. E. Caswell, Union Twist Drill Co., 11 S. Clinton St., Chicago, Ill. Meets with American Railway Tool Foremen's Association.

TORONTO RAILWAY CLUB.—R. H. Burgess, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, first Friday of each month, except July, August and September, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—D. J. Higgins, Gardner-Denver Company, 332 S. Michigan Ave., Chicago, Ill. Meets with Roadmasters' and Maintenance of Way Association.

TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, 1177 E. 98th St., Cleveland, Ohio. Annual meeting, May 2-4, 1935, Hotel Sherman, Chicago, Ill. (Tentative).

WESTERN RAILWAY CLUB.—C. L. Emerson, C., M., St. P. & P., Chicago, Ill. Regular meetings, third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago, Ill.

Construction

CHESAPEAKE & OHIO.—This road has authorized the construction of additional tracks for the C. C. B. Smokeless Coal Company at Stotesbury, W. Va., at a cost of about $25,890. Bids were received January 11 to enlarge Mason's Tunnel at Millboro, Va., to standard section and to line it with concrete at an estimated cost of $208,200.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—This road has awarded a contract to Ross & White Company for steel hopper and coal handling equipment to be installed in a coaling station at Terre Haute, Ind.

NEW YORK CENTRAL-ERIE.—The New York Public Service Commission has denied petitions of the New York Central and the Erie requesting a rehearing on the commission's order directing the elimination of all the existing grade crossings of these companies in Niagara Falls, N. Y. The order directing the elimination of the crossings was adopted about two months ago and provided that 43 dangerous grade crossings be eliminated by relocating the railroads on a new alignment in the eastern portion of the city. The plan also provided for the separation of the grades of highways and railroads along the proposed relocated railroad routes. No detailed estimates have been prepared, but a rough calculation indicates that the construction can be made within $12,500,000.

NORFOLK & WESTERN.—The Interstate Commerce Commission has authorized this company to construct an extension of a line 14.5 miles in a southeasterly direction from Grundy, Va.; and another extension from a connection with its Garden Creek line at the mouth of Dismal Creek to a point near the mouth of Knob branch, approximately 24 miles.

STATEN ISLAND RAPID TRANSIT COMPANY.—This road, a subsidiary of the Baltimore & Ohio, is receiving bids until February 5 for grading, masonry and other heavy construction work in connection with the elimination of three grade crossings at Fort Wadsworth, S. I., to cost about $900,000. This work is conditional upon the securing of a P.W.A. loan.

Equipment and Supplies

FREIGHT CARS

THE NIACET CHEMICALS CORPORATION has ordered three tank cars from the American Car & Foundry Company.

THE CHICAGO, BURLINGTON & QUINCY has ordered five light-weight hopper cars from the Pressed Steel Car Company.

THE LIQUID CARBONIC CORPORATION has ordered five steel-sheathed box cars of 40 tons capacity from the American Car & Foundry Company.

THE CHESAPEAKE & OHIO has ordered five self-clearing hopper cars of 50 tons' capacity from the Bethlehem Steel Company.

IRON AND STEEL

THE CHICAGO, BURLINGTON & QUINCY has ordered 16,000 tons of rails, placing 4,000 tons with the Colorado Fuel & Iron Company, 4,300 tons with the Inland Steel Company, and 7,700 tons with the Illinois Steel Company.

AIR CONDITIONING

THE LOUISVILLE & NASHVILLE has placed orders for air conditioning 25 sleeping and parlor cars and 5 dining cars. Ice activated and mechanical equipment of the Pullman Company will be installed in the Pullman cars, while Safety Car Heating & Lighting steam jet equipment will be used in the 5 dining cars.

THE NORFOLK & WESTERN will spend approximately $80,000 for the air-conditioning with electro-mechanical system and remodeling eight of its standard passenger coaches. The work will be carried out in the railroad's Roanoke, Va., shops. The project will include the construction of new arched ceilings, the installation of dome lights, laying of new rubber tile floors and repainting the interior of the cars. With engineering details well underway and orders placed for most of the material, work on the equipment is expected to be started in the near future. The completion of this work will give the Norfolk and Western 54 air-conditioned units; these include 18 new coaches, recently placed in operation on The Pocahontas and The Cavalier, seven dining cars and 21 Pullman cars. The railway spent more than a million dollars during 1934 on passenger improvements.

MISCELLANEOUS

THE CHILEAN STATE RAILWAYS, reported in the *Railway Age* of January 19 as having placed an order with the Locomotive Firebox Company for thermic syphons for 10 locomotives, has increased the order to include thermic syphons for 25 locomotives. These locomotives are be-

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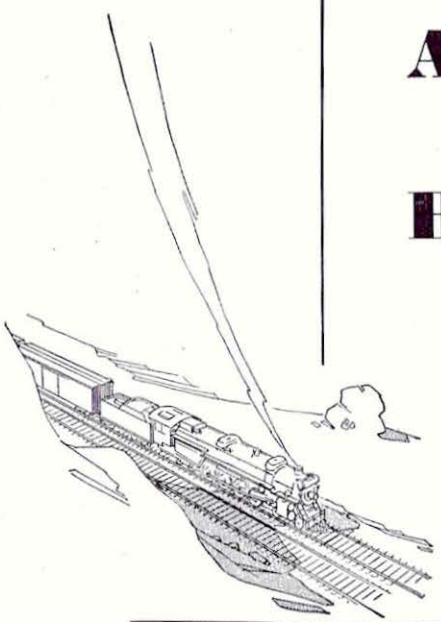
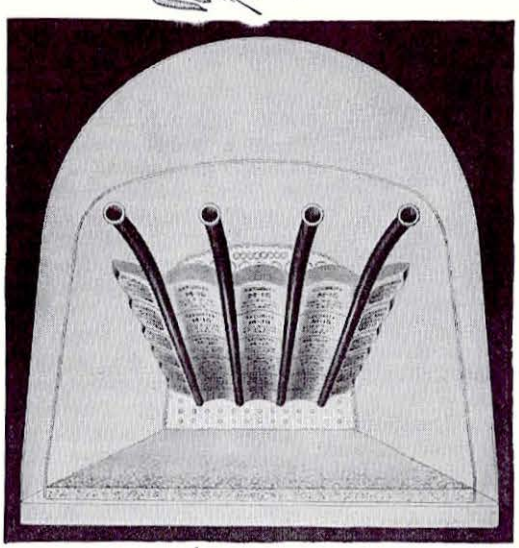
Be Sure

A COMPLETE BRICK ARCH

Is Applied!





There's More to
SECURITY ARCHES
Than Just Brick

Measured in terms of dollars, Security Brick gives greater economies today than ever before.

Longer, faster runs and heavier trains is the reason for this.

This increased severity of service, however, also emphasizes the need for more intensive maintenance.

The arch lasts over a far greater number of ton miles than formerly but — if full arch economy is to be obtained — be sure a complete arch is applied at every boiler wash.

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

NRA MEMBER U.S. WE DO OUR PART

AMERICAN ARCH CO.
INCORPORATED

Locomotive Combustion Specialists » » »

ing built in Germany, 10 by Henschel & Sohn, 10 by Esslingen and 5 by Krupp. The Chilean State Railways have previously equipped 17 locomotives with thermic syphons and the above orders increased the total to 42 locomotives.

The Chicago, Milwaukee, St. Paul & Pacific's new streamlined steam locomotives, being constructed by the American Locomotive Company, will be equipped with Wilson feedwater heaters, known as "Locomotive Water Conditioners." These locomotives will also be equipped with Wilson sludge removers and power operated blow-off equipment. All of this equipment is similar in general design to that installed on the latest Northern Pacific passenger power, described in the *Railway Age* of November 3, 1934, and to the Milwaukee passenger power, the performance of which was described in the *Railway Age* of December 23, 1933.

Supply Trade

W. R. Walsh, resident sales manager at Chicago for the **Ewald Iron Company,** Louisville, Ky., has been elected a vice-president of the company, with headquarters at Chicago.

Thomas O'Leary, Jr., formerly assistant sales manager of the Western division of the Transportation department, **Johns-Manville Sales Corporation,** has been promoted to manager of the Western division of the Transportation department, with headquarters at Chicago, Ill.

O. B. Capps, formerly eastern sales manager for the old Locomotive Stoker Company of Pittsburgh, Pa., is now representing the **Standard Stoker Company, Inc.,** having his headquarters at its New York office at 350 Madison avenue, but maintaining his residence at Oceana, Va.

A. H. Skaer has been placed in charge of the **Cochise Rock Drill Manufacturing Company,** a subsidiary of the **Independent Pneumatic Tool Company.** Mr. Skaer was formerly associated with the Denver Rock Drill Manufacturing Company and for many years was its president. He will make his headquarters in Los Angeles, Cal., where the Cochise plant is located.

Hunter Michaels has been appointed district sales manager of the **American Locomotive Company,** with headquarters at Cleveland, Ohio, succeeding **William E. Corrigan.** Mr. Michaels was born in Chicago on September 26, 1889, and was educated in the public schools of that city and at Lewis Institute. After working in the shops of several car manufacturing companies in the middle West as draftsman, estimator and traveling engineer, he was appointed in 1913 mechanical engineer of the Union Metal Products Company, Chicago, a position he held until joining the Army in 1917, where he served for 16 months as First Lieutenant of the 114th Engineers. He rejoined the Union Metal Products Company in 1919, serving as assistant manager, until 1923, when he left to become sales agent of the Railway Steel-Spring Company, at Chicago. On the absorption of this company by the American Locomotive Company in 1926, Mr. Michaels joined the sales staff of the American Locomotive Company in Chicago, serving as sales agent and assistant to the vice-president until his recent promotion.

The Ehret Magnesia Manufacturing Company, Valley Forge, Pa., has appointed the **George A. Nicol Corporation,** 500 Fifth avenue, New York, its exclusive sales representative in connection with sales of its products to railroads, locomotive builders and car builders. This company manufactures a large line of

George A. Nicol, Jr.

magnesia and asbestos products for use as locomotive lagging, car insulation, packings and other purposes. **George A. Nicol, Jr.,** president of the George A. Nicol Corporation, was formerly executive vice-president of the Johns-Manville Sales Corporation and has had an important part in the development of insulation and packing materials for the railroads during the past 25 years. Associated with him in this new Corporation are: **Paul D. Mallay,** assistant to the president; **C. Allen Koenig,** vice-president; **Paul H. Twohey,** vice-president, and **William F. Kiesel, 3d,** vice-president.

TRADE PUBLICATION

Storage Batteries for Railroad Service.—The Gould Storage Battery Corporation, Depew, N. Y., has just released a 24-page publication covering the application of Gould heavy-duty armored Kathanode storage batteries for mine and industrial locomotive service. A general description of the battery and its mechanical features, supplemented by information concerning types and cell capacities, is included in the first section of the bulletin. The second section is devoted to performance curves and their explanation. These explanations are aimed to show how battery performance affects the operation of the locomotive. A third section is devoted to industrial locomotives and full-gage full storage battery and combination locomotives for railroad service.

Financial

Canadian National.—*Capital Revision Talk Revived.*—Consideration is being given to a revision of the capital structure of the Canadian National by the board of trustees and in due course a report will be submitted to Parliament, Minister of Railways R. J. Manion told the House of Commons last week. On this assurance from the Minister, A. E. Munn, (Liberal M. P. from Vancouver North), withdrew a resolution which would have requested the trustees to consider the matter. Dr. Manion said that the C. N. R. owed the government $1,490,000,000 and that its obligations in the hands of the public totaled $1,255,000,000, on which latter the annual interest charge was $57,000,000. Since in its most prosperous year, 1928, the C. N. R.'s income available for interest was only $44,000,000 (or less than sufficient to cover the present annual interest charges on securities held by the public), Dr. Manion contended that to wipe out the entire debt of the road to the government would not solve its difficulties; the government would still have to pay to C. N. R. security owners, as it does now, the difference between the net earnings of the railways and the annual interest charge on its outstanding securities.

Chicago, Milwaukee, St. Paul & Pacific.—*Abandonment and Operation.*—The Interstate Commerce Commission has authorized this company to abandon parts of a line of railroad extending from a point near Colton, S. D., to a point about one mile south of Huntimer, 2.8 miles, and from a point about two miles south of Chester to Madison, 13.5 miles. The Great Northern has been authorized to abandon part of a line extending from a point about one mile south of Huntimer to a point about two miles south of Chester, 3.1 miles. The Milwaukee has been authorized to acquire a half interest in and to operate over parts of a line of the Great Northern to take the place of the segments which it is abandoning and the Great Northern has been authorized to acquire a half interest and to operate over that part of the Milwaukee which parallels the segment which it will abandon. The two railroads have also been authorized to construct connecting tracks to make the joint operation possible. The Interstate Commerce Commission has authorized the Milwaukee to abandon a branch line extending from Doernig, Wisc., to Kalinke, 14.7 miles.

Illinois Central.—*Equipment Trust Certificates.*—The Interstate Commerce Commission has authorized this company to assume liability as guarantor for $12,000,000 of its Series Q, equipment trust certificates. The certificates will mature serially from August 1, 1935, to February, 1944, and will be sold to the government at par.

Illinois Central.—*G. & S. I. Note.*—The Interstate Commerce Commission has authorized the Gulf & Ship Island to issue a promissory note for $6,511,169 to be delivered to the Illinois Central, which will deposit the note with the Reconstruction

Continued on next left-hand page

AGAIN the enterprise of American railroads asserts itself in the inauguration by the Chicago & North Western Railway of a new high-speed passenger service between Chicago and the Twin Cities. The establishment of this fast train — which clips hours from the previous fastest running time between Chicago, Milwaukee, and the Twin Cities — reflects particularly the progressiveness of the Chicago & North Western in meeting the demands of the traveling public for speed . . . comfort . . . safety.

Standard-size, air-conditioned cars provide the roominess and comforts to which the American public is accustomed. The "400" is handled by Pacific type locomotives, modified especially to meet the requirements of this service and capable of a speed of over 100 miles an hour, which exemplifies the fact that steam motive power, with Elesco superheaters, can furnish transportation at high sustained speeds.

As locomotives have been improved to meet changing conditions, Elesco superheaters have been developed to keep abreast with the demands of modern operation. As a result, modern superheater locomotives can furnish the increased capacity required to maintain high speeds with economy . . . all the speed, in fact, that is suitable for practical railroading with assured travel safety and comfort.

In any plans for speeding up schedules, locomotives equipped with Elesco superheaters have an essentially leading part.

● ●

The "400", North Western's new fast train between Chicago, Milwaukee, and the Twin Cities, is scheduled to make the distance of a little over 400 miles in seven hours — practically 400 miles in 400 minutes. The schedule between Chicago and Milwaukee is 85 miles in 80 minutes. Four oil-fired Pacific type locomotives, with Elesco superheaters, have been modified especially for handling this train.

ELESCO

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, Inc.

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NEW YORK

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U.S.
WE DO OUR PART

Peoples Gas Building
CHICAGO

Canada: The Superheater Company, Limited, Montreal

Superheaters - Feed Water Heaters - Exhaust Steam Injectors - Superheated Steam Pyrometers - American Throttles

Finance Corporation as collateral security for loans.

INTERMOUNTAIN.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon its entire line extending from Barber Junction, Idaho, to Steirman. The Department of Public Works of the State of Idaho appeared in favor of the abandonment, expressing the desire to acquire the railroad roadbed to use for highway purposes.

MISSOURI & NORTH ARKANSAS.—*Sale.*—The petition of Frank Kell, principal stockholder of the Missouri & North Arkansas, seeking a sale of the railroad within 60 days, was approved by Judge J. E. Martineau in the district court of Little Rock, Ark., on January 22, the order approving the petition directing that an order of sale be prepared by attorneys. The road was placed in receivership in May, 1927.

MISSOURI PACIFIC.—*Investigation.*—The independent committee for bondholders, headed by Dr. Charles A. Beard, in a letter made public on January 28, is demanding a government investigation of this railroad's financing and bankruptcy proceedings. The action follows the position taken by Senators Wheeler and Couzens recently in seeking an investigation of various receiverships. Last December the protective committee for first and refunding mortgage bonds likewise sought an investigation of the company's affairs.

SOUTHERN PACIFIC.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to purchase the property of the Inter-California, which it now controls and operates.

WASHINGTON & OLD DOMINION.—*Abandonment.*—The receiver has applied to the Interstate Commerce Commission for authority to abandon the line between Thrifton, Va., and Great Falls, 12.1 miles.

Average Prices of Stocks and of Bonds

	Jan. 29	Last week	Last year
Average price of 20 representative railway stocks..	33.52	34.84	47.71
Average price of 20 representative railway bonds..	76.03	76.18	75.55

Dividends Declared

Dayton & Michigan.—87½c, semi-annually; 8 Per Cent Preferred, $1.00, quarterly, both payable April 1 to holders of record March 15.

Elizabeth & Trenton.—$1.00, semi-annually; 5 Per Cent Preferred, $1.25, semi-annually, both payable April 1 to holders of record March 20.

Erie & Pittsburgh.—7 Per Cent Guaranteed, 87½c, quarterly, payable March 10 to holders of record February 28; Guaranteed Betterment, 80c, quarterly, payable March 1 to holders of record February 28.

Louisville, Henderson & St. Louis.—$4.00, semi-annually, payable February 15 to holders of record February 1.

Northern R. R. of New Jersey.—4 Per Cent Guaranteed, $1.00, quarterly, payable March 1 to holders of record February 19.

Pennsylvania R. R. Co.—50c, payable March 15 to holders of record February 15.

Pittsburgh, Ft. Wayne & Chicago.—$1.75, quarterly, payable April 1 to holders of record March 9.

Pittsburgh, Youngstown & Ashtabula.—7 Per Cent Preferred, $1.75, quarterly, payable March 1 to holders of record February 20.

Reading.—First Preferred, 50c, quarterly, payable March 14 to holders of record February 21.

Shamokin Valley & Pottsville.—$1.50, semi-annually, payable February 1 to holders of record January 15.

Railway Officers

EXECUTIVE

G. H. Kerr, freight traffic manager for the Southern at Cincinnati, Ohio, has been appointed assistant vice president in charge of traffic, with headquarters at Washington, D. C.

FINANCIAL, LEGAL AND ACCOUNTING

C. C. Kirk, supervisor of division expenditures of the Long Island, with headquarters at New York, has been promoted to supervisor of regional expenditures of the Central region of the Pennsylvania, with headquarters at Pittsburgh, Pa., succeeding **C. R. Ross.**

OPERATING

Frank B. Westenberg, chief clerk in the car service department of the Chicago & Illinois Midland, has been promoted to superintendent of car service, with headquarters as before at Springfield, Ill., succeeding **David C. Frederick,** deceased.

F. E. Haines, assistant superintendent of the Creston division of the Chicago, Burlington & Quincy at Creston, Iowa, has been appointed superintendent of the Hannibal division, with headquarters at Hannibal, Mo., succeeding **L. C. McBride,** deceased. **J. S. Miller,** assistant superintendent on the Sterling division at Sterling, Colo., has been transferred to the Creston division, succeeding Mr. Haines. **J. E. Thiehoff,** trainmaster at St. Joseph, Mo., has been appointed assistant superintendent at Sterling, succeeding Mr. Miller.

C. B. Wilson, superintendent of the Wisconsin and Peninsula division of the Minneapolis, St. Paul & Sault Ste. Marie at Minneapolis, Minn., has been appointed acting general superintendent of transportation, succeeding **W. C. Ranous,** who has been granted leave of absence on account of illness. **J. R. Branley,** superintendent of the Minneapolis division at Enderlin, N. D., has been transferred to Minneapolis, succeeding Mr. Wilson. **B. G. Cross,** superintendent of the Missouri River division at Bismarck, will also assume the duties of superintendent of the Minnesota division.

TRAFFIC

H. J. Dentzman, assistant general freight agent of the Chicago & Eastern Illinois at St. Louis, Mo., has been appointed general freight agent.

John R. MacLeod, general freight agent of the Illinois Central, at Memphis, Tenn., has been promoted to assistant traffic manager at the same point, succeeding **Robert D. Reeves,** who has been transferred to New Orleans, La., where he replaces **Martin L. Costley,** deceased.

Willis L. Reeves, assistant general freight agent at Chicago, has been promoted to general freight agent at Memphis to succeed Mr. MacLeod.

R. J. Brown, general freight agent for the Southern, with headquarters at Atlanta, Ga., has been appointed freight traffic manager at Cincinnati, Ohio, succeeding **G. H. Kerr,** promoted. **C. D. Thomas,** assistant general freight agent with headquarters at Atlanta, Ga., has been appointed general freight agent, with the same headquarters, succeeding Mr. Brown. **H. W. Bondurant,** assistant freight traffic manager at Charlotte, N. C., has been transferred to Atlanta, Ga. **G. H. Wilcox,** freight traffic manager at Atlanta, Ga., has been appointed assistant freight traffic manager, with headquarters at Birmingham, Ala. **W. M. King,** assistant freight traffic manager at Birmingham, Ala., has been transferred to Charlotte, N. C.

S. D. Sparkes, general freight agent of the Missouri-Kansas-Texas of Texas, who has been promoted to freight traffic manager, with headquarters as before at Dallas, Tex., as noted in the *Railway Age* of January 26, first entered railway service in 1913 as a stenographer in the traffic department of the Kansas City, Mexico & Orient (now part of the Atchison, Topeka & Santa Fe) at San Angelo, Tex. Subsequently Mr. Sparkes was promoted to chief clerk in the passenger department and in December, 1917, he went with the

S. D. Sparkes

M-K-T as soliciting freight agent at Galveston, Tex. In April, 1918, he became connected with the Galveston, Houston & Henderson as a clerk in the traffic department at Galveston, leaving this company later in the same year to go with the Missouri-Kansas-Texas as a rate clerk at Dallas. In the following year Mr. Sparkes left the Katy to go with the Christie & Eastern and the Kinder & North Western (the latter now abandoned) as chief clerk to the general freight and passenger agent at Shreveport, La. In 1920, he returned to the Katy as traveling tariff inspector at Dallas, being appointed tariff compiler at the same point later in the same year. During the next six years Mr. Sparkes served successively as rate clerk, chief rate clerk and chief clerk in the general freight office at

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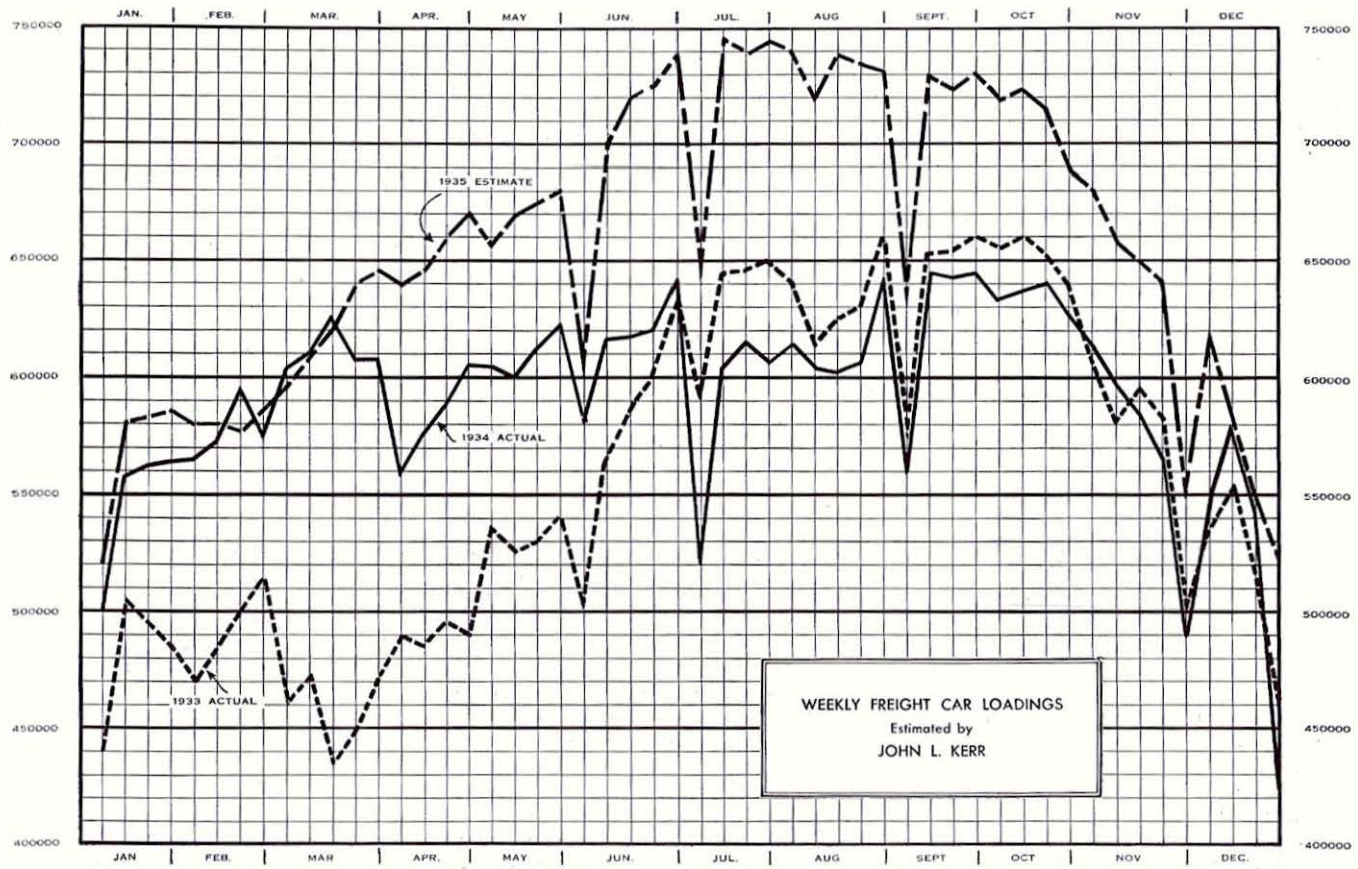
"GOING UP!"



MR. JOHN L. KERR, a railroad economist, for years has been making surprisingly accurate estimates of carloadings. ● In 1932 he correctly predicted a contra seasonal decline during the first half of the year and estimated total carloadings to be 27,300,000. Actual carloadings were 28,179,000. ● Early in 1933, he published his forecast of a spring rise and no seasonal expansion in the fall. He estimated total carloadings of 31,000,000 against an actual of 28,960,000, the large difference being attributable mostly to the unforeseen bank holiday. ● In 1934 he correctly predicted a falling off of traffic during the summer with no fall expansion. He estimated total loadings to be 30,703,000 as against an actual of 30,785,000. ● His estimate for 1935, herewith reproduced, predicts an expansion of carloadings starting in March and continuing throughout the summer. He estimates that the total carloadings will be 34,125,000 in the year 1935. ● Such accurate forecasting merits much more than just passing attention. His past record is such that due concern should be felt concerning the ability to handle this predicted traffic with present motive power facilities.

AMERICAN LOCOMOTIVE COMPANY

30 CHURCH STREET · NEW YORK · N.Y.

Dallas, being appointed assistant general freight agent at St. Louis in 1926. In the following year he was transferred to Dallas, where he was promoted to general freight agent in 1931, the position he was holding at the time of his recent promotion to freight traffic manager.

R. T. DuBose, assistant general freight agent on the Missouri-Kansas-Texas at Dallas, Tex., who has been appointed general freight agent at the same point, as noted in the *Railway Age* of January 26, first entered railway service in 1912 as a rate clerk in the office of the auditor of the Texas & Pacific at Dallas. His service with the Katy began in 1917, when he was made a rate clerk in the accounting department at Dallas. Following a period of service with the United States Army, he returned to the Katy in 1919, serving as a rate clerk until March, 1920, when he resigned. In February, 1921, he reentered the service of this company as a rate clerk in the accounting department at Dallas, being transferred to the traffic department in 1922. In 1926, Mr. DuBose was promoted to chief clerk in the freight traffic department at Dallas, and in 1931 he was further advanced to assistant general freight agent with the same headquarters. He was holding the latter position at the time of his recent promotion to general freight agent.

R. T. DuBose

SPECIAL

S. A. Boyer has been appointed publicity manager for the New York, New Haven & Hartford, with headquarters at New Haven, Conn. Mr. Boyer was formerly in charge of sales promotion and publicity for the Baldwin Locomotive Works at Philadelphia, Pa.

OBITUARY

P. B. Speed, auditor freight accounts for the Sand Springs, died on January 19 at his home in Sand Springs, Okla.

John T. Fredericks, director of development of the Missouri Southern, with headquarters at Leeper, Mo., and formerly general manager of this company, died on January 15 at the age of 76 years. Before becoming connected with the Missouri Southern, Mr. Fredericks served for a number of years as a conductor on the Chicago & North Western.

L. C. McBride, superintendent of the Hannibal division of the Chicago, Burlington & Quincy, with headquarters at Hannibal, Mo., died suddenly in his office at that point on January 15.

David C. Frederick, superintendent of car service of the Chicago & Illinois Midland, with headquarters at Springfield, Ill., died on January 19. Mr. Frederick was born on September 28, 1858, at Monticello, Iowa, and entered railway service in 1882 as weighmaster with the Iowa Central (now part of the Minneapolis & St. Louis), later being appointed a clerk in the car accountant's office. In March, 1883, Mr. Frederick went with the Northern Pacific where he served as a clerk and chief statistical clerk in the car accountant's office until 1890, when he was made car accountant of the St. Paul & Northern Pacific (part of the Northern Pacific). Later in the same year he became chief clerk in the office of the car service agent of the Chicago Great Western. In 1894 Mr. Frederick was appointed car service agent of the St. Louis, Chicago & St. Paul (later part of the Chicago, Peoria & St. Louis). In 1897 he was made car service agent of the C. P. & St. L., and when the Peoria division of this company was absorbed by the Chicago & Illinois Midland in 1926, Mr. Frederick was made superintendent of car service of the latter company.

Clifford Stanley Sims, former resident vice-president of the Delaware & Hudson at Montreal, Que., died on January 30 at his home in New York. He was 67 years old. Mr. Sims was born on January 12, 1868, on Prairie Ridge Plantation, Ark. He was educated at Mt. Holly, N. J., and entered railway service in September, 1885, as chainman on the Pennsylvania-Schuylkill Valley (now Pennsylvania) at Hamburg, Pa. During December, 1885, he was employed in the office of the auditor of passenger receipts of the Pennsylvania at Philadelphia. He then became rodman for the Philadelphia Midland at Fernwood, Pa. From April to July, 1886, he served in the office of the supervisor of the Amboy division of the Pennsylvania at Mt. Holly, N. J. He served as levelman and transitman for the Piedmont & Cumberland (now Western Maryland) at Rawlins, W. Va., from July to October, 1886. From the latter date until January, 1887, he was employed as transitman for the Meriden & Waterbury (now New Haven) and then served in the office of the assistant engineer of the Belvidere division of the Pennsylvania at Lambertville, N. J. Mr. Sims served successfully from December, 1888, until April, 1902, as assistant supervisor of the Cleveland and Pittsburgh division of the Pennsylvania, Lines West of Pittsburgh, at Cleveland, Ohio; assistant engineer maintenance of way, Western division, at Ft. Wayne, Ind.; acting supervisor at Upper Sandusky, Ohio; assistant engineer maintenance of way, Western division, at Ft. Wayne, Ind.; acting assistant engineer of motive power at Ft. Wayne; engineer maintenance of way of the Toledo division at Toledo, Ohio; engineer maintenance of way, Eastern division, at Allegheny, Pa.; engineer maintenance of way, Chicago Terminal division, at Chicago; acting superintendent and then superintendent of the same division, all on the Pennsylvania. In April, 1902, Mr. Sims became general superintendent of the New York division of the Baltimore & Ohio and in May, 1903, was promoted to general manager of the same road. In May, 1905, he was appointed assistant to the president of the Erie at New York. Mr. Sims became second vice-president and general manager for the Delaware & Hudson at Albany, N. Y., in May, 1907, and in June, 1917, he was appointed resident vice-president at Montreal, being furloughed in 1923.

H. D. Chamberlain, comptroller for the Delaware & Hudson, died on January 30 in New York, after a long illness. Mr. Chamberlain was born on December 26, 1884, at Dunmore, Pa. He was educated in the public schools of that city, and entered railway service as a messenger boy in the office of the president of the Erie & Wyoming Valley (now part of the Erie) in 1898. He served consecutively to February, 1903, as clerk in the purchasing department of the same road, as clerk in the master car builder's office and as bill clerk for the Erie at Dunmore, Pa. From 1903 to 1909, he served in the division superintendent's office of that road as stenographer, assistant timekeeper, maintenance of way clerk and division accountant. He was appointed stenographer in the office of the third vice-president of the Delaware & Hudson at New York, in May, 1909, remaining in that position until May, 1910, when he was appointed statistical clerk in the office of the auditor of disbursements, at Albany, N. Y. He served as chief clerk to the general auditor from October, 1910, to October, 1914, when he became acting freight claim agent. He was appointed freight claim agent in May, 1915. From June, 1918, to March, 1920, Mr. Chamberlain served as auditor for the railroad department of the same road and as auditor of steam railroad, hotel and boat line subsidiaries. On the latter date he was appointed auditor of the Delaware & Hudson, with jurisdiction over revenue, disbursements and freight claim departments. He was appointed comptroller in June, 1929.

H. D. Chamberlain

A Thrilled World Acclaims THE Triumph OF THE "400"

FASTEST TRAIN on the AMERICAN CONTINENT

400 MILES 400 MINUTES

Gliding away from Chicago ... streaking through Milwaukee ... Northw...

...with its connections permits late afternoon departure from New York —a day for business or pleasure in Chicago —arrive Twin Cities same evening—only a night en route.

No Extra Fare

NORTHBOUND		SOUTHBOUND	
Lv. Chicago	3:30 pm	Lv. Minneapolis	3:00 pm
Ar. Milwaukee	4:50 pm	Lv. St. Paul	3:30 pm
Ar. St. Paul	10:30 pm	Lv. Milwaukee	9:10 pm
Ar. Minneapolis	11:00 pm	Ar. Chicago	10:30 pm

With its big, standard-size, substantial steel cars—fully air-conditioned—the "400" demonstrates that comfort, roominess, luxury need not be sacrificed to sustained high speed.

$1,000 Cash Prizes to passengers for best letters describing trip on the "400." Ask for particulars.

8 FINE TRAINS DAILY

Between Chicago and St. Paul-Minneapolis

Leaving Chicago

Morning	Afternoon	Early Evening	Late Evening
10:00 am	3:30 pm	8:30 pm	10:30 pm

For information, tickets, reservations apply to F. G. FITZ-PATRICK, General Agent, Room 322—500 Fifth Avenue, Phone LOngacre 5-7766, New York, N. Y.

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Insure Maximum Efficiency and Economical Fuel Consumption

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WORLD'S LOWEST PRICES

CHEVROLET

AGAIN in 1934, the insistent demand for Chevrolet products has made Chevrolet *the world's largest builder of trucks* as well as of passenger cars. And truck buyers who want to save money will find that these are not only *the world's lowest-priced* trucks, but that they are also very economical to operate and maintain due to the excellent quality which Chevrolet builds into them. They are big—rugged—dependable trucks. They are powered by *six-cylinder valve-in-head* engines which use very little gas and oil. And they are extremely long-lived . . . built to do their job and do it faithfully over a long period of years. Buy a Chevrolet Truck and you buy fine, dependable, economical haulage service—*at the world's lowest price!*

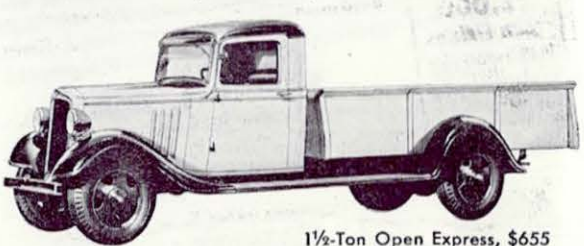
CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN

Compare Chevrolet's low delivered prices and easy G.M.A.C. terms. A General Motors Value

Half-Ton Panel, $560
(112" Wheelbase)

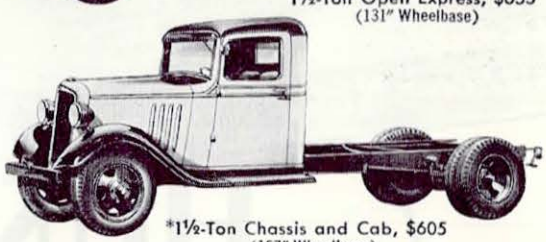
*1½-Ton Stake, $660
(131" Wheelbase)

*1½-Ton Platform, $630
(131" Wheelbase)



1½-Ton Open Express, $655
(131" Wheelbase)

*1½-Ton Chassis, $485
(131" Wheelbase)



*1½-Ton Chassis and Cab, $605
(157" Wheelbase)

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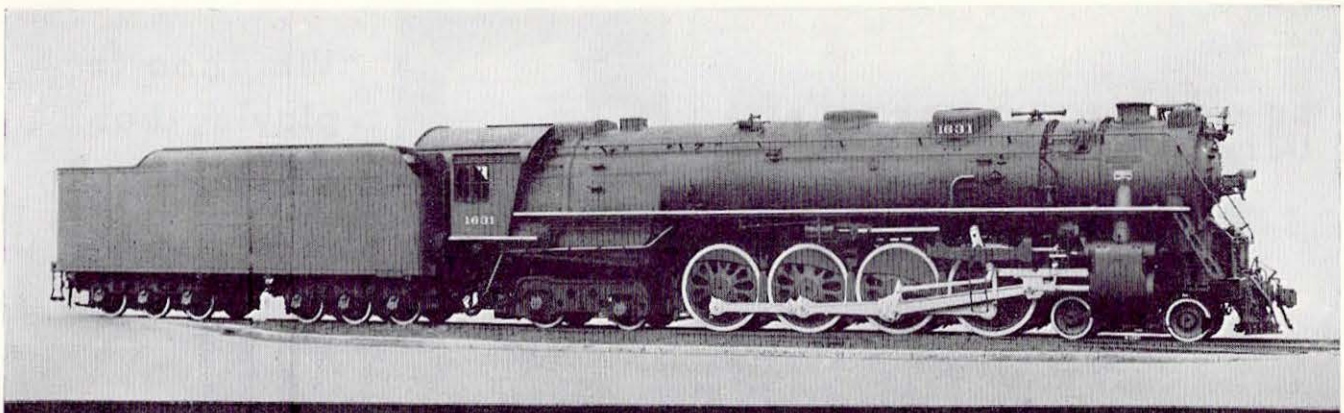

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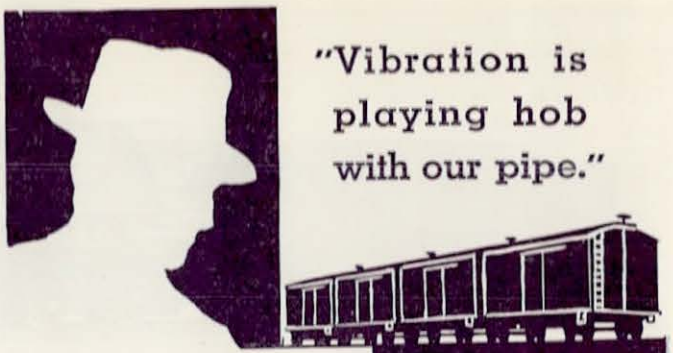

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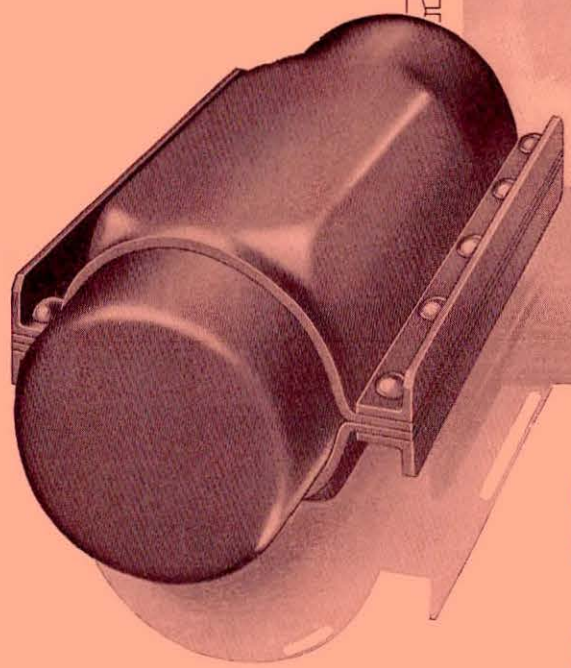

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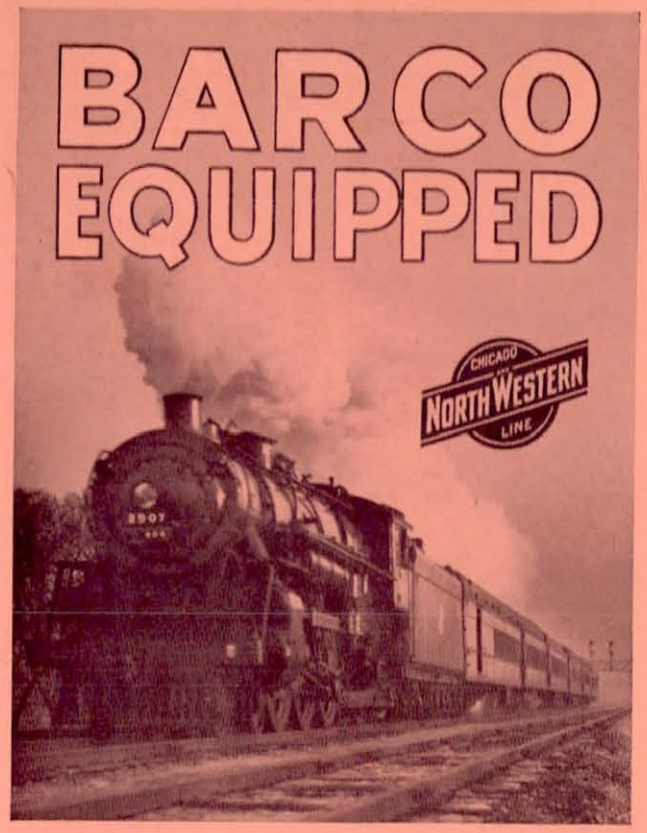

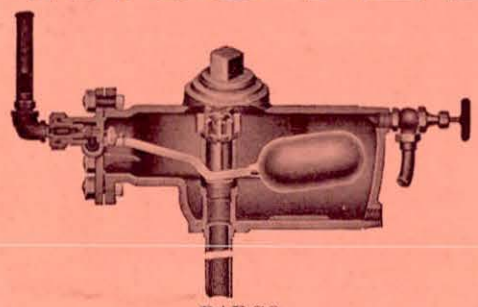

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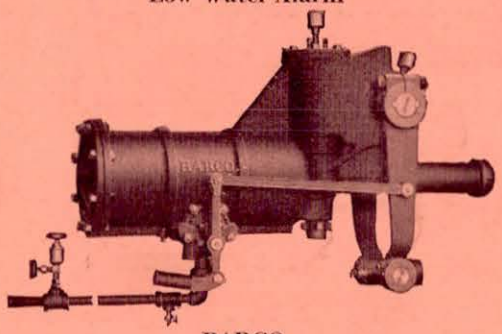

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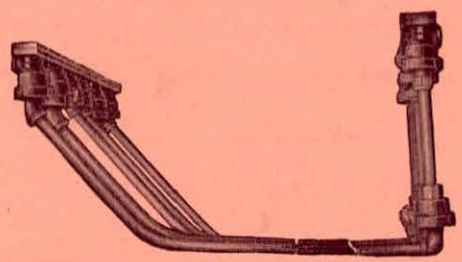

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